DOCUMENT RESUME

ED 278 288 HE 019 886

TITLE	Regulatory Mechanisms for Nursing Training and Practice: Meeting Primary Health Care Needs. World Health Organization Technical Report Series No. 738. Report of a WHO Study Group.
INSTITUTION	World Health Organization, Geneva (Switzerland).
REPORT NO	ISBN-92-4-120738-8
PUB DATE	86
NOTE	77p.
AVAILABLE FROM	World Health Organization Publications Center, 49 Sheridan Avenue, Albany, NY 12210.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Accrediting Agencies; *Certification; Community Health Services; Federal Legislation; *Federal Regulation; Foreign Countries; Higher Education; Laws; Licensing Examinations (Professions); *Nursing; *Nursing Education; Policy Formation; *Primary Health Care; Professional Continuing Education; Public Health; Public Policy; State Legislation; *State Licensing Boards
IDENTIFIERS	*World Health Organization

ABSTRACT

A report on laws and regulations governing nursing education and practice in 81 countries belonging to the World Health Organization and effects on primary health care is presented by an international group of experts. Suggestions for training and licensure are provided to national governments and nursing regulatory bodies to promote the goal of achieving "health for all" through primary health care. Four roles of the primary health care nurse are considered: direct care provider, educator of health personnel and the public, supervisor/manager of primary health care services, and health care researcher/evaluator. Attention is also directed to: nursing tasks in primary health care, basic and continuing nursing education for primary health care, legal barriers to nursing training and practice, legislative strategies to expand nursing functions, assessing a country's health needs, and developing policy and legislation. Recommendations are offered for: regulating nursing education; redesigning educational programs; regulating nursing functions; and strengthening nursing boards, the role of national nursing organizations, and the role of WHO. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED278288

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

WHO

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

NE 019 826

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 165 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries; promoting the health of mothers and children; combating malnutrition; controlling malaria and other communicable diseases including tuberculosis and leprosy; having achieved the eradication of smallpox, promoting mass immunization against a number of other preventable diseases; improving mental health; providing safe water supplies; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides, and pharmaceuticals; formulating environmental health criteria; recommending international nonproprietary names for drugs; administering the International Health Regulations; revising the International Classification of Diseases, Injuries, and Causes of Death; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

* *
*

The *WHO Technical Report Series* makes available the findings of various international groups of experts that provide WHO with the latest scientific and technical advice on a broad range of medical and public health subjects. Members of such expert groups serve without remuneration in their personal capacities rather than as representatives of governments or other bodies. An annual subscription to this series, comprising 15 to 20 such reports, costs Sw. fr. 80.

+E

This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of the World Health Organization

Regulatory mechanisms for nursing training and practice: meeting primary health care needs

Report of a
WHO Study Group

World Health Organization
Technical Report Series
738

World Health Organization, Geneva 1986

ISBN 92 4 120738 8

© World Health Organization 1986

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. For rights of reproduction or translation of WHO publications, in part or *in toto*, application should be made to the Office of Publications, World Health Organization, Geneva, Switzerland. The World Health Organization welcomes such applications.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

ISSN 0512-3054

PRINTED IN SWITZERLAND

86/6776 – Schüler S.A. – 8500

CONTENTS

	Page
1. Introduction	6
1.1 Implications for nursing of the goal of "Health for all"	6
1.2 Earlier WHO activities relating to the regulation of nursing training and practice	8
1.3 Objectives and scope of the Study Group	11
2. Nursing education and practice in relation to primary health care: ideal and reality	13
2.1 The nurse's role in primary health care	13
2.2 Nursing tasks in primary health care	15
2.3 Involvement of nurses in implementing national strategies to achieve "Health for all"	17
2.4 Basic and continuing education of nurses for effective participation in primary health care	18
2.5 Regulations governing nursing education	20
2.6 Regulations governing nursing practice	26
2.7 Legal barriers to, and constraints on, nursing training and practice	31
3. Strategies for adapting and reorienting nursing education and practice to primary health care	41
3.1 Regulation of nursing education for primary health care	41
3.2 Legislative strategies to expand nursing functions	42
3.3 Administrative strategies of institutions	46
4. Improving the education and practice of nurses in health systems based on the primary health care approach	47
4.1 Assessment of a country's health needs	48
4.2 Development of policy and legislation	48
4.3 Information and education of the public and policy-makers	50
4.4 Need for continuing education	50
4.5 Guidelines for an overall strategy to achieve legislative changes	50
5. Conclusion	51
6. Recommendations	52
6.1 Regulating nursing education	52
6.2 Redesigning educational programmes	53
6.3 Regulating nursing functions	53
6.4 Strengthening nursing boards	54
6.5 Strengthening the role of national nursing organizations	54
6.6 Strengthening the role of WHO	55
Acknowledgements	55
References	55
Annex 1. Explanation of terms used in this report	58
Annex 2. Authorization of nursing tasks relating to primary health care: results of a survey	61

WHO STUDY GROUP ON THE STRENGTHENING OF REGULATORY MECHANISMS FOR NURSING TRAINING AND PRACTICE RELATING TO PRIMARY HEALTH CARE

Geneva, 9–13 December 1985

*Members**

Miss F. Affara, Department of Nursing, College of Health Science, Ministry of Health, Manama, Bahrain (*Rapporteur*)
Dr H. Awasum, Ministry of Health, Yaoundé, Cameroon
Dr R. Hapsara, Adviser to the Minister of Health, Ministry of Health, Jakarta, Indonesia
Mrs A. Kordas, Chief, Department of Nursing, Academy of Medicine, Lublin, Poland
Mrs E. Ngugi, Deputy Chief Nursing Officer, Ministry of Health, Nairobi, Kenya
Miss E. Ortin, President, Philippine Nurses' Association, Malate, Manila, Philippines
Professor M. Styles, Dean, School of Nursing, University of California, Medical Centre, San Francisco, CA, USA (*Chairman*)

Representatives of other organizations

Christian Medical Commission
Dr R. Harnar, Consultant, CMC, Geneva, Switzerland

Council for International Organizations of Medical Sciences
Dr Z. Bankowski, Executive Secretary, CIOMS, Geneva, Switzerland

International Committee of Catholic Nurses
Miss M. Dervoigne, ICCN, Wilrijk, Belgium

International Council of Nurses
Miss C. Holleran, Executive Director, ICN, Geneva, Switzerland

League of Red Cross and Red Crescent Societies
Miss M. Robinson, Technical Adviser for Nursing, Geneva, Switzerland

Secretariat

Dr T. Fülöp, Director, Division of Health Manpower Development
Dr A. Mangay Maglacas, Chief Scientist for Nursing, Division of Health Manpower Development (*Secretary*)
Professor R. Roemer, Adjunct Professor of Health Law, School of Public Health, University of California, Los Angeles, CA, USA (*Temporary Adviser*)
Miss M. Storey, United Kingdom Central Council for Nursing, Midwifery and Health Visiting, London, England (*Temporary Adviser*)

---

* Unable to attend: Miss E. Will, Assistant Director (Nursing Education and Manpower Planning), Department of Health, Wellington, New Zealand; Ms A. Puente, Member of Board of Directors, Nursing College, San Borja, Lima, Peru.

REGULATORY MECHANISMS FOR NURSING TRAINING AND PRACTICE: MEETING PRIMARY HEALTH CARE NEEDS

Report of a WHO Study Group

A WHO Study Group on the Strengthening of Regulatory Mechanisms for Nursing Training and Practice relating to Primary Health Care met in Geneva from 9 to 13 December 1985. The meeting was opened by Dr F. Partow, Assistant Director-General, who welcomed the participants on behalf of the Director-General.

Dr Partow emphasized the importance and timeliness of the meeting, pointing out that the regulation of nursing education and practice had become increasingly important because of (*a*) the great advances in medicine, science, and public health in the last quarter-century and the consequent need to reorient nursing practice and training; (*b*) recognition that, if health services were to be efficient and effective, all professional health workers would have to function at their maximum level of capability; (*c*) the widening of nursing education, both theoretical and practical, as a result of which the competence of nurses had increased; and, above all, (*d*) the adoption by WHO in 1977, and by the International Conference on Primary Health Care held at Alma-Ata, USSR, in 1978, of the goal of "Health for all by the year 2000" necessitating *changes* in the training and functions of nurses to enable them to work in health systems based on the primary health care approach.

Dr Partow drew the attention of the Study Group to resolution WHA36.11 of the Thirty-sixth World Health Assembly on nursing and midwifery personnel. In it, the Health Assembly recognized the vitally important part that nursing and midwifery personnel played in training and supervising community health workers and the significance of nursing organizations, because of their size and close contact with individuals and communities, as a source of support for national strategies and plans for primary health care in almost every country.

Calling on nursing personnel and their national organizations to support WHO's policies on primary health care, the Health Assembly asked WHO to ensure support for Member States in their

efforts to provide nursing personnel with adequate training in the basic essentials of primary health care, the management of primary health care activities, and appropriate supportive research.

In conclusion, Dr Partow called on the Study Group to clarify the issues involved and to make recommendations on the urgent matter of adjusting policies on the regulation of nursing training and practice, in order to provide support for primary health care.

1. INTRODUCTION

In nearly every country, nurses constitute the largest category of health worker, bearing the principal responsibility for patient care, administrative duties, the training and supervision of auxiliary personnel, and the provision of community health services. Working in many different types of inpatient and outpatient services in both the public and private sectors of health care, nurses provide care for acute and long-term cases, take part in promotive, preventive, therapeutic, and rehabilitative activities, and serve all age groups in the population with specialized care adapted to the particular needs of each group. In spite of their central role in all types of health service, nurses generally function at less than their highest level of performance because of legal, administrative, educational, and social constraints. The reorientation of regulatory mechanisms to meet the needs of primary health care is, in fact, a strategy for changing nursing education and practice.

1.1 Implications for nursing of the goal of "Health for all"

The "Health for all" movement has exposed the dichotomy between the capacity of nurses to strengthen health systems through the primary health care approach and their actual roles in many countries. The "Health for all" movement was launched in 1977 with a resolution (WHA30.43) adopted by the Thirtieth World Health Assembly:

> "... the main social target of governments and WHO in the coming decades should be the attainment by all the citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life" (*1*).

This resolution was reaffirmed and amplified by the Declaration of Alma-Ata, which defined primary health care as:

"... essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process." (*2*, pp. 3–4).

The Alma-Ata Declaration specified the essential components of primary health care as follows:

"... education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs." (*2*, p. 4).

The five basic principles of primary health care are: accessibility of health services to all populations; maximum individual and community involvement in the planning and operation of health care services; emphasis on services that are preventive and promotive rather than curative services; the use of appropriate technology; and the integration of health development with total overall social and economic development.

Central to the implementation of activities to provide and extend primary health care is the role of the nurse. The commitment of WHO and its Member States to the development, reorientation, and maintenance of comprehensive health systems based on the primary health care approach has led to an examination of (*a*) the barriers that frequently prevent nurses from making their full contribution to the delivery of primary health care services; and (*b*) ways of overcoming these barriers.

1.2 Earlier WHO activities relating to the regulation of nursing training and practice

WHO has long been concerned with the regulation of nursing practice and training. The First World Health Assembly, in 1948, recognized the importance of nursing care, and through the years it has given high priority to strengthening nursing services (*3*, *4*). In 1949, the WHO Expert Committee on Nursing was established to advise the Organization on the training of nurses and on nursing services. At one of the early meetings of the Committee it was emphasized that:

> "The public recognition and registration of nurses and midwives, and more recently, of auxiliary nursing personnel has often been slow and ineffective" (*5*).

In response to this situation, the first comparative study of legislation governing nursing education and practice was undertaken by the WHO Secretariat in 1953 (*6*).

In 1974, a WHO Expert Committee on Community Health Nursing tackled the question of how to provide essential health services to the hundreds of millions of people throughout the world with little or no access to health care. The challenge of finding ways to close the enormous gap between needs and services led the Committee to recommend significant changes in nursing education and practice. It stated:

> "Perhaps the most dramatic change in the roles and functions of community health nurses will be seen in the additional diagnostic and therapeutic responsibilities required of them. First, they will be expected to teach primary health workers many of the functions traditionally performed by nurses and guide these new personnel in case-finding, disease prevention, patient and family care, community programme development, health education, and curative and related functions. An even more demanding responsibility of the community nurse will be the fulfilment of roles usually ascribed to general medical practitioners. These include examining the sick and disabled, determining the source of problems presented, and treating acute conditions as well as the major prevalent diseases in the community. As the nurse becomes more competent in these and associated nursing skills, her role as teacher, supporter, and consultant of the primary health care workers will also expand" (*7*, pp. 22–23).

The work of the Study Group responsible for the present report was based on the seminal work of the 1974 Expert Committee.

In 1977, the Thirtieth World Health Assembly adopted a resolution (WHA30.48) recognizing the important role of nursing and midwifery in primary health care teams. The resolution recommended, among other things, a review of the functions of different types of personnel, including nursing and midwifery personnel, within the context of national health programmes, intensified efforts to develop retraining and continuing education programmes for nursing/midwifery personnel consistent with redefined and restructured roles, and opportunities for nursing personnel to acquire the skills necessary for primary health care, including immunization.

The Declaration of Alma-Ata in 1978 marked a new turning in WHO's work for the development of community health services (*2*). In setting the goal of health for all peoples of the world by the year 2000, the Alma-Ata Conference identified primary health care as the means of achieving this goal. The nursing profession recognized its key role in this effort and, in the following year, WHO and the International Council of Nurses held a workshop on the subject in Nairobi.[1] The participants pledged the commitment of the nursing profession to primary health care.

In this same year the WHO Regional Office for Europe prepared a comprehensive analysis of legislation on nursing/midwifery services and education in 25 countries in the European Region (*8*).[2] On the basis of this analysis, a WHO working group identified measures restricting the provision of nursing and midwifery services and recommended various improvements in the legislation.

In November 1981, an informal meeting of nurses was held in Geneva to consider further the role of nursing in meeting the goal of "Health for all by the year 2000". Among the results of this meeting, which was attended by nursing leaders from seven countries and officials concerned with nursing from five of WHO's regional offices, was a call for an extension of the traditional roles of nurses to embrace a wider range of diagnostic, therapeutic, and

---

[1] WHO. The role of nursing in primary health care. Report of the Workshop, Nairobi, 30 September–1 October 1979. Geneva, 1979 (unpublished document PHC/NUR/ICN 79.1).

[2] See also: WHO. Legislation concerning nursing/midwifery services and education. Report on a WHO study. Copenhagen, WHO Regional Office for Europe, 1981 (unpublished document ICP/SPM 007).

rehabilitative functions and for the fundamental changes in the basic, postbasic, and continuing education of nurses that this development would entail. It was considered that immediate steps would be required to educate nurses to assume responsibility for the provision of primary health care in the community.[1]

At the Thirty-sixth World Health Assembly in 1983, a resolution (WHA36.11) was adopted on the role of nursing/midwifery personnel in the strategy of "Health for all". It called on nursing/midwifery personnel and their national and international organizations to support training and information programmes related to primary health care. It also called on Member States to develop a comprehensive nursing/midwifery component in their strategies to achieve "Health for all".

In 1983, following a WHO survey describing postbasic training programme for nurse educators and managers,[2] a WHO Expert Committee on Education and Training of Nurse Teachers and Managers with Special Regard to Primary Health Care examined the role of nursing personnel at several levels of health care and noted that:

> "... the most dramatic changes that have occurred in the roles and functions of nursing personnel engaged in health systems based on the primary health care approach were their involvement in diagnostic and therapeutic activities at both peripheral and intermediate levels"(9, p. 18).

The Expert Committee stated that it would be necessary for nurses (*a*) to teach community health workers and traditional health practitioners many of the functions nurses had previously performed themselves, and (*b*) to undertake functions and accept responsibilities traditionally reserved to medical practitioners, including examination of the sick and disabled, treatment of acute conditions, identification of the source of health problems, and prevention of the major preventable diseases in the community. These two changes are similar to those foreseen a decade earlier by

---

[1] WHO. Nursing in support of the goal of health for all by the year 2000. Report of a meeting, 16–20 November 1981. Geneva, 1983 (unpublished document HMD/NUR/82.2), pp. 30–31.

[2] MAILLART, V. & MANGAY MAGLACAS, A. Report on a survey of postbasic training programmes for nurse teachers (educators) and administrators (managers). Geneva, World Health Organization, 1983 (unpublished document HMD/NUR/83.1).

the WHO Expert Committee on Community Health Nursing (see page 8).

It was further observed by the WHO Expert Committee on Education and Training of Nurse Teachers and Managers with Special Regard to Primary Health Care that the majority of programmes preparing nurse teachers and managers focused only on the teaching and management of nursing care in hospitals and thus were not relevant to the main social and health needs of countries (both developing and developed). It therefore recommended, *inter alia*, the organization of intensive courses for directors and teachers of postbasic nursing schools and programmes to reorient them to the principles of primary health care; the provision of community-based and community-focused learning experiences to enable nurse teachers and managers to acquire the competence necessary to identify and meet the health needs and demands of communities; and the establishment of systems of continuing education to keep up to date the knowledge and skills of nursing teachers and managers of educational institutions and practice areas.

A further examination of the expanded role of nurses will be found in six country case studies recently carried out as a collaborative project by WHO and the University of North Carolina, USA. These studies describe the training and deployment of nurses as providers of primary health care (*10*).

In addition to its own undertakings, WHO has benefited from the work of other international organizations—notably the International Labour Organisation and the Council of Europe (*11*) —on questions relating to nursing personnel. The investigations and publications of the International Council of Nurses over the past 25 years have provided leadership and coordination in the development of nursing practice and legislation (*12*).

1.3 Objectives and scope of the Study Group

The Study Group was convened to examine laws and regulations governing nursing education and practice as they relate to the delivery of primary health care. A finding of the meeting held in 1981 on the role of nursing in achieving the goal of "Health for all" (see preceding section) was that:

> "Nursing practice and education are governed by legislation that is often archaic, determined by persons from other disciplines, detrimental to the status of the nurse, and not in tune with the

needs of society. The primary health care strategy involves the re-evaluation of old policies and this must certainly include nursing legislation."[1]

The objectives and terms of reference of the present Study Group were based on an affirmative view of the role of laws and regulations in health care services. Such laws and regulations should not, of course, offer any impediment to the delivery of the health services needed by the people. But, more than that, the law should authorize and promote the provision of needed health services.

The specific objectives of the Study Group were:

1. To review regulatory mechanisms and identify factors that facilitate or constrain the development of educational programmes to prepare nurses for appropriate functions in health systems based on the primary health care approach.
2. To recommend strategies and actions that can be adopted by national governments and nursing regulatory bodies and to modify and/or strengthen the regulations and requirements affecting nursing education programmes and licensure for nursing practice, consonant with national strategies to achieve the goal of "Health for all" through primary health care.
3. To suggest guidelines for developing regulatory mechanisms governing nursing education and practice in order to assure the appropriate preparation of nurses for primary health care.

The terms of reference of the Study Group related to the education and practice of general nurses. It was not to be concerned with specialized categories of nursing personnel, and the various kinds of auxiliary nursing personnel were also excluded. Nor was the regulation of the education of midwives included, since the problems involved were in many respects different from those relating to nurses.

While the Study Group focused on the regulation of the education and practice of nurses only, its scope of inquiry was nevertheless broad. Its discussions included basic, postbasic, and continuing education, and encompassed the role of nurses in primary health care in all types of service (promotive, preventive, therapeutic, and rehabilitative) and at all levels of care (primary, secondary, and tertiary), in addition to their role in the management

[1] WHO. Nursing in support of the goal of health for all by the year 2000. Report of a meeting, 16–20 November 1981. Geneva, 1983 (unpublished document HMD/NUR/82.2), p. 31.

of primary health care. Finally, it dealt with the regulation of the education and practice of nurses in the context of health systems now being reoriented towards the primary health care approach.

2. NURSING EDUCATION AND PRACTICE IN RELATION TO PRIMARY HEALTH CARE: IDEAL AND REALITY

All over the world nurses are being called on to work in health systems that are undergoing reorientation to the primary health care approach. The Study Group examined the preparation of nurses for their role in such systems and the precise functions and tasks involved. But what is the actual situation? Do prevailing educational programmes prepare nurses for their role in primary health care? Does the current regulation of nursing practice permit the requisite changes?

2.1 The nurse's role in primary health care

On the basis of an examination of nursing education and practice in primary health care, including legal barriers and other constraints affecting the nurse's contribution, the Study Group set about defining the various components of the nurse's role in such care. Regardless of the supply and distribution of physicians, an extension of the traditional role of the nurse is urgent if primary health care is to be available to people everywhere.

The Study Group agreed that the role of the nurse in primary health care should be developed in the context of the health care system of each country. Nursing education programmes must fit into the country's long-term plans for health manpower development, it being recognized that change is subject to a variety of social, economic, and political factors.

Four main aspects of the nurse's role in primary health care were identified by the Study Group: (*a*) the direct care provider; (*b*) the teacher and educator of health personnel and the public; (*c*) the supervisor and manager of primary health care services; and (*d*) the researcher and evaluator of health care.

2.1.1 *The direct care provider*

The direct provision of care has been an important feature of nursing from the beginning. The nurse accordingly needs to have a

variety of clinical skills. As a direct provider, she must participate fully in all the essential components of primary health care, hence her additional roles as an educator and as a facilitator and manager of health care.

2.1.2 *The teacher and educator*

Since the nurse's central concern should be the prevention of disease and disability, she should educate individuals and families on health life-styles and the community on the primary prevention of ill health and on protective and supportive health measures. Her role as teacher also involves the training of other health care personnel, including professional colleagues, physicians, and auxiliary personnel.

2.1.3 *The supervisor and manager*

The nurse engaged in primary health care must exercise leadership. Her duties include supervising other personnel in providing care, planning health services for the community in conjunction with other members of the health team, and organizing and administering community health services. In these functions the nurse assesses the health needs of the community, listens to the community's views on these needs, and communicates with the community, acting as its advocate. As a community organizer, the nurse involves people in their own care and enlists the cooperation of other sectors of society concerned with health, e.g., the housing, sanitation, agriculture, industry, and education sectors. From being a direct provider of care to individuals, the primary health care nurse thus becomes a manager of care on a wider scale.

2.1.4 *The researcher and evaluator*

Health needs and services are not static. The nurse engaged in primary health care should monitor, observe, analyse, and study health conditions and services in her area. As a primary contact for people when they are sick, the nurse is in a position to determine health needs and to understand the problems involved in meeting these needs. This knowledge enables her to recommend changes or innovations in primary health care services.

2.2 Nursing tasks in primary health care

After examining the way in which the overall role of nurses is changing to meet the goal of "Health for all" and the nursing functions (promotive, preventive, curative, rehabilitative, and managerial) needed in primary health care, the Study Group turned to the tasks that nurses currently perform in the course of patient care. The findings of an informal survey on the subject, covering 81 countries in the six WHO Regions, were examined.[1] The respondents had been asked whether nurses in their countries were authorized to perform certain tasks and, if so, by what method or methods.

As Table 1 indicates, at least 77 of the 81 countries have regulatory mechanisms whereby nurses may carry out the first eight procedures: giving injections, giving oral medication, giving immunizations, handling trauma in emergencies, taking blood pressure, doing simple diagnostic tests, managing chronic diseases, and treating common diseases. For all these procedures the most common sources of authority are nursing practice acts, except for giving immunizations and treating common diseases, which are most frequently authorized by ministry of health (or hospital) regulations.

The five tasks *least* commonly authorized are: performing minor surgery, prescribing oral contraceptives, inserting intrauterine devices (IUDs), prescribing drugs for common ailments, and diagnosing common diseases. Nevertheless, each of these tasks is authorized in 48–62 countries representing 59–76% of the respondents, although the approach varies. For example, the prescription of oral contraceptives and the insertion of IUDs, when performed by nurses, may be regulated by the ministry of health, by a hospital, or by the specific order of a physician for a particular patient. In a number of countries, midwives and nurse practitioners are authorized to perform these two tasks and also to carry out physical examinations on pregnant women, so that the number of countries allowing non-physicians to perform them is larger than it appears to be from the survey, which is limited to tasks performed by registered nurses with basic nursing training.

---

[1] The data from this survey are analysed in: MANGAY MAGLACAS, A. & ROEMER, R. Survey of nursing tasks relating to primary health care. Geneva, World Health Organization, 1985 (unpublished document HMD/NUR/SG/2). A summary of the survey will be found in Annex 2.

Table 1. Nursing tasks relating to primary health care in 81 countries, by number of countries authorizing each task and method of authorization[a]

Task	Total number of countries authorizing task	Number of countries not authorizing task	Number of countries authorizing task by:				
			nursing practice act	regulation of ministry of health or hospital	physician's standing orders	specific order of a physician for a specific patient	other authority
Giving injections	81	0	47	35	27	25	6
Giving oral medication	81	0	48	37	25	26	6
Giving immunizations	80	1	33	47	22	16	7
Handling trauma in emergencies	80	1	39	29	26	32	7
Taking blood pressure	79	2	49	29	28	23	4
Doing simple diagnostic tests	78	3	41	34	27	21	9
Management of chronic diseases	78	3	34	31	29	31	7
Treating common diseases	77	4	22	26	24	21	10
Referring for X-rays or other diagnostic tests	69	10	12	18	22	30	8
Performing physical examinations	70	11	27	25	20	20	10
Diagnosing common diseases	62	19	19	24	17	10	8
Prescribing drugs for common ailments	59	22	17	21	22	20	7
Inserting IUDs	55	26	12	20	16	24	10
Prescribing oral contraceptives	54	27	13	24	19	21	10
Performing minor surgery	48	33	18	18	15	23	5

[a] The numbers for the several forms of authorization do not add up to the total number of countries responding, because a task is usually authorized by more than one method.

Thus, as Table 1 shows, all 15 tasks which were previously carried out by physicians only, are now considered as nursing tasks in a majority of the responding countries (59% for the task least frequently authorized). The three procedures most frequently authorized—giving injections, giving oral medication, and taking blood pressure—are generally regulated by a nursing practice act. For several other procedures, however, ministry of health (or hospital) regulations constitute the most important source of authority; these include giving immunizations, treating common diseases, prescribing drugs for common ailments, prescribing oral contraceptives, and inserting IUDs. For only one procedure—referring for X-rays or other diagnostic tests—are standing orders by a physician the most common source of authority. A specific order by a physician for a particular patient, or by some other authority, may also sanction many of these tasks, notably handling trauma in emergencies, managing chronic diseases, and referring for X-rays or other diagnostic tests.

Differences between the WHO Regions regarding authorization of these tasks are minor, although a particular source of authority may be more frequently used in one region than in another (see Annex 2).

The principal conclusion from the survey of nursing tasks reviewed by the Study Group is that the trend all over the world is to extend the scope of nursing practice by one means or another. Despite this trend in both developing and developed countries, the regulatory mechanisms that have been devised to authorize various tasks may be weak, uncertain, or of dubious legal effect. The most serious shortcoming of these regulatory mechanisms is that they do not generally authorize reoriented nursing curricula and training, and therefore nurses are not trained for a wider role in primary health care.

2.3 Involvement of nurses in implementing national strategies to achieve "Health for all"

The Study Group noted that, in developing countries alone, more than 50% of health care is currently provided by nurses, who constitute the principal professional staff in health centres and generally the only professional personnel in many subcentres. Yet they are trained for bedside care in hospitals, and not as organizers and providers of care in the community.

By the very nature of their role in caring for the sick, nurses come into contact more frequently with people than other health workers do, and their relationship with them tends to be closer and of longer duration. Because of this frequent and close contact with members of the community, the extension of the functions of the nurse may help to promote the participation of individuals and communities in their own health development. The increased participation of nurses in primary health care may help to extend the favourable and close contact nurses enjoy with their communities and put them in a position to encourage full involvement of the community in the planning and implementation of health activities. The extension of the natural role of nurses in primary health care may also enable them to work more effectively with the community in coordinating health development with development in other sectors such as housing, environmental sanitation, education, etc. Teamwork and the multisectoral approach to the provision of health care are crucial and nurses, who have achieved some measure of independent practice in recent years, should now strive towards the even higher goal of interdependent practice that is based upon a common cause, mutual respect, and equality.

As yet, there is little documentation dealing with the activities and tasks of nurses in primary health care. The cornerstone of their participation in such care is their education for new and changing roles. The members of the Study Group recognized the need to define these roles and to reorient the basic and continuing education of nurses accordingly.

2.4 Basic and continuing education of nurses for effective participation in primary health care

In considering the orientation of both basic and continuing education of nurses to the primary health care approach, the Study Group acknowledged the many reports and documents issued by WHO since 1974 that have stressed the importance of such a change of emphasis.

The Study Group reaffirmed that the objectives of nursing training must be determined by the health needs of society. So far, however, only lip service has been paid to this goal. Nursing curricula need to be revised to prepare nurses with the clinical and other skills necessary for them to serve as providers of primary health care; with the epidemiological knowledge to detect and

prevent disease; with the understanding of behavioural responses required in order to promote healthful life-styles; and with the organizational and administrative ability to plan, manage, and evaluate community health programmes.

An *intersectoral approach* and *involvement of the community* are crucial, and individuals and communities should participate in decision-making on all health matters affecting them. The knowledge gained by nurses through professional training and experience must be shared with individuals, families, and communities in order to generate local expertise and self-help. The community learns easily; what is not so easy is to obtain the acceptance by nurses and other professional health workers of the sharing of knowledge and expertise in this way. It will require, above all, a change of attitude on the part of the provider of care towards the consumer so as to develop a partnership that will have a positive effect on the health of the community. The curriculum must be permeated with this idea of sharing, as well as with the principles of primary health care as they apply to care given at home, in a health centre, in industry, or in a hospital.

Students of nursing need to be provided with a clear analysis of the structure and culture of the particular society they are being educated to serve. The attention given to understanding groups and their health needs is still insufficient. Unless the social nature of health and illness is understood, the nurse will be unable to function competently in primary health care.

The members of the Study Group discussed the experiences of several countries in reorienting curricula to emphasize primary health care, and the problems encountered during the process, notably:

- *lack of a nucleus of nursing education planners* imbued with the will to develop nursing personnel equipped for primary health care;
- *lack of retraining for teachers*, who need practical experience of working with the community as part of their reorientation to primary health care;
- the *extreme isolation of nursing education planners*, who rarely consult persons from other branches of health care, or other sectors, about educational programmes;
- *lack of material resources* to support the reorientation of curricula: the wish to do well is not enough—resources (personnel and funding) are a crucial adjunct; and

— *lack of involvement of community groups*, who represent the public interest, in curriculum-planning.

The members of the Group stressed that the reorientation of nursing education systems and curricula to reflect the primary health care approach will require resources to be redirected and applied to a planned and deliberate restructuring process. Furthermore, the enormous potential of nurses as providers and managers of primary health care can be developed for the benefit of society only if *all* nurses are properly trained for the purpose.

2.5 Regulations governing nursing education

Since the scope of nursing practice is influenced by the delegation of functions, which depends, in turn, on the quantity and quality of nursing education, the most important provisions on the licensing of nurses are those relating to the approval of nursing schools and to curriculum requirements (*13*). In most countries the licensing function is closely bound up with the supervision of nursing education and training (*14*).

The regulation of nursing education involves a number of tasks in connection with: (*a*) approval of schools, hospitals, and other sources of academic and clinical training; (*b*) establishment of admission requirements for nursing schools (e.g., minimum age, number of years of previous schooling); (*c*) establishment of the duration and content of the curriculum and the kind of clinical training required; and (*d*) preparation, administration, and supervision of the examinations needed in order to qualify as a nurse (*12, 15*).

The Group noted that the majority of countries assign the responsibility for regulating nursing education to the ministry of health, as for example in Austria, Denmark, France, Morocco, and the Netherlands. In some countries the ministry of social affairs, social welfare, or health and welfare has this responsibility, as for example in Greece, Norway, and Portugal. In other countries, the regulation of nursing education is entrusted to the ministry of education, as for example in the case of private nursing schools in the Philippines. In some countries the ministries of health and education jointly exercise this responsibility, as for example in Belgium, Czechoslovakia, Finland, Iceland, Italy, and Sweden. Another pattern is to have a statutory board regulate nursing education, as in Ghana, India, Nigeria, and the United Kingdom.

Generally, the regulation of nursing education is through a national system, but in several countries nursing education is regulated at subnational level. In the Federal Republic of Germany the *Länder* (regions) prescribe the nursing curriculum; in the USA, nursing licensing boards in each state set the curricula and accredit the schools in conjunction with a voluntary professional organization, the National League for Nursing. Under a subnational system of regulation the curricula may vary among the jurisdictions within a single country, but other mechanisms, such as a national licensure examination, promote uniform qualifications. A contrast with those countries having governmental regulatory bodies is presented by Canada where the professional association of nurses in each province regulates the content of nursing education, and by Switzerland where the Swiss Red Cross supervises the curriculum in all nursing schools.

As regards the nature and location of the regulatory bodies for nursing education, the members of the Group agreed that it seems to matter little for the promotion of primary health care whether the regulatory function is vested in a health, education, or other statutory agency. Factors other than the primary function of the regulatory agency apparently determine whether the regulatory mechanism is used to foster the delivery of primary health care by nurses or whether it perpetuates traditional nursing education and practice. One may speculate whether the determining factors are the political commitment of the government to primary health care, the extent to which the nursing profession and its association are concerned with the law regulating nursing, or something else again. One factor that seems influential in determining the scope of nurses' functions and the character of their education is the supply of physicians. Where there is a plentiful supply of qualified physicians, as in Brazil, Cuba, Egypt, Greece, India, Portugal, and Turkey, there seems to be less interest in extending the role of nurses in primary health care. But if a country suffers from a shortage or a maldistribution of physicians, then it is more inclined to equip nurses to provide primary health care services, especially in the rural areas.

Turning to the relationship of the regulatory process to the promotion of primary health care, the Group found that the various functions involved in the process of regulating nursing education may be exercised either in such a way as to promote primary health care affirmatively or, more frequently, in a traditional manner that instead prepares nurses for patient care in hospitals under the

direction of physicians. They reviewed some examples of the regulation of nursing education with respect to approval of training institutions, admission requirements, duration and content of the curriculum, licensing examinations, and continuing education.

2.5.1 *Approval of training institutions*

Accreditation or approval of nursing schools, hospitals, and other places used for the academic and clinical training of nurses is a classical function of regulatory agencies (*12*). Depending on the legislation in force, this function may be exercised to continue nursing education along traditional paths or it may be exercised in innovative ways.

In one country, a council, established under legislation governing nursing, is responsible for establishing the system of training nurses and midwives. Although members of the two professions constitute the majority of the council, new legislation is needed to change from hospital-based to community-centred nursing education. Nursing educators are seeking legislative authorization to extend the role of nurses, to incorporate the concepts and principles of primary health care in nursing training, and to enable nurses to reorient their performance to community service.

In Senegal, Decree No. 77-017 enacted in 1977 authorizes the provision of a new type of nursing education, designed to provide training in public health and health education and adapted to the needs of the people of Senegal, in particular the rural population. Under this decree, the National School of State-Registered Nurses is directed to adapt nursing education to the health problems of the country, to equip nurses to deal with tropical diseases through a primary health care approach, and to enable nurses to identify and provide care for health problems, not only in hospitals, but in rural areas as well. The stated aim of this reorientation of nursing education is to prepare Senegalese nurses for a professionally rewarding position in Senegal and prevent their emigration to hospital-based jobs elsewhere. Above all, it aims at equipping nurses to meet the urgent need for primary health care in the rural areas.

The degree to which nursing education programmes are based on the requirements of each country's health services still leaves much room for improvement. There is a wide dichotomy between theory and practice. An effective way of correcting this shortcoming, the

Study Group agreed, may perhaps be to put nurse educators in charge of educational institutions for nurses.

2.5.2 *Admission requirements*

The number of years' schooling required for admission to nursing education varies from country to country. Increasingly the prerequisite for admission to a nursing school is completion of secondary education. However, different levels of preliminary education may be required for different nursing programmes. As nursing curricula are changed to strengthen training for the provision of primary health care, it may be helpful to revise the laws relating to the educational background of those seeking to enter the nursing profession.

In Israel, regulations authorizing nurses to carry out selected "medical activities" were issued in 1977 and followed up in 1981 by regulations to raise the entrance requirements to nursing schools, thereby ensuring that nurses would have a firm basis of general education (R. Bergman, personal communication, 1984). A legal analysis of the proposed changes in the law governing nursing practice in Spain suggests, among possible future needs, a revision of admission requirements "in order to modernize fully the regulation of nursing" (L. B. Andrews, unpublished observations, 1984). The Group considered that, while it may not always be possible to raise entrance requirements for nursing schools just when nurses are being prepared for a wider role in primary health care, more rigorous admission requirements will ultimately lead to better nursing and better professional opportunities for nurses.

2.5.3 *Duration and content of the curriculum*

Licensing laws, or regulations issued pursuant to them, often include the syllabus for the nursing curriculum. Alternatively, the curriculum may be based on the functions of a nurse, as defined in the law on nursing practice. A recent study covering 109 countries found that the legislation varied from (*a*) laws not specifying any curriculum to (*b*) those designating general content areas, (*c*) those requiring specific courses, and (*d*) those prescribing the number of hours' instruction to be given and the number of procedures to be performed (*12*).

Where regulations on the nursing curriculum have been in force for many years, it is likely that they do not reflect contemporary needs. Thus, Brazil's regulations on a minimum nursing curriculum, enacted in 1972, are deemed inadequate for present-day nursing functions. In 1976, a modernized law was proposed, but it has not yet been enacted (J. Feitoya de Carvalho, personal communication, 1984).

Examples of countries that have enacted new legislation to bring the nursing curriculum into line with the needs of primary health care are Nigeria and Senegal. Senegal's Decree No. 77-017 providing for a new type of education oriented to national needs (see section 2.5.1) extends the length of studies from two years to three. The government report presenting the decree states that two years of training are insufficient to teach the numerous techniques needed for hospital practice. Moreover, an extra year of training is needed to expand the teaching of tropical medicine, public health, and health education, and to provide four months' field experience.

In Nigeria, the Nurses Decree of 1970 provides for the establishment of the Nursing Council of Nigeria with power to approve educational programmes and to authorize the trial and recognition of innovations in training and examination. Under this law and Decree No. 89 of 1979, the Nursing Council has approved a new curriculum oriented to prevention, community nursing, collaboration between the nursing schools and the nursing service, and the preparation of nurses for broad functions in providing care, teaching, planning, evaluating, supervising, and coordinating. Recommended by a Task Force Committee on Basic Nursing Education for Nigeria, the new curriculum differs from the former one in three ways: (*a*) it is community-oriented and requires the teaching of preventive and promotive aspects of health; (*b*) some traditional medical functions previously performed by nurses without formal training and without legal authorization have now been included in the curriculum; and (*c*) a liberal arts course comprising studies in the behavioural and social sciences, the humanities, etc. has been included to provide a solid background for the improvement of nursing practice. The approval of the new curriculum by the Nursing Council is a first step towards keeping nursing education abreast of evolving roles in community nursing.

The most dramatic example of the exercise of regulatory mechanisms to promote primary health care is the decision no longer to restrict clinical training in nursing to the hospital alone. The Study

Group emphasized the importance of using health centres, and other establishments in the community that offer ambulatory care, to provide nurses with clinical experience in both preventive and curative health care.

Several countries have enacted legislation along these lines. In Senegal, under Decree No. 77-017, practical training for nurses is provided on a full-time basis in the first and third years, not only in hospitals and clinics, but also in rural health centres and in remote areas of the country. Thus, nurses come into contact with isolated rural communities in which they can bring to a remote hut the type of health education and service customarily provided in a health centre.

The new basic nursing education curriculum in Nigeria stresses the need for student nurses to have practical experience as community health resources rather than to concentrate their experience in hospitals. To implement this approach, a panel of nursing advisers to the government recommended that, where a community health facility has qualified and experienced staff-members, particularly if they have a flair for teaching, they should be appointed as associate tutors while continuing their duties at the facility.

The experience of Thailand in training public health nurse practitioners to provide integrated preventive services and medical care to the country's rural population brings out the importance of supervised clinical training in the community. Following an exhaustive evaluation of the Thai project, it was recommended that sufficient time for practice be allocated in the curriculum and also that, after graduation, the public health nurse practitioner should be given the opportunity to improve her skills by practising under the close supervision of a physician (*16*).

2.5.4 *Licensing examinations*

One aspect of educational supervision is the holding of licensing examinations or, alternatively, the recognition of nursing school examinations as sufficient for nursing registration. In some countries, e.g., the Federal Republic of Germany, Japan, the Philippines, the United Kingdom, and the USA, a national licensing examination, distinct from nursing school examinations, is required (*12, 14*). In others, such as Belgium, France, and Norway, nursing school examinations qualify graduates for registration. Regardless of the system of examination, the approved examinations reflect the

emphasis of the curriculum. The importance attached in these examinations to the knowledge and practice of primary health care will depend on the extent to which curricula are revised to emphasize the essential components of primary health care.

2.5.5 *Continuing education*

In most countries, continuing education is within the province of the voluntary sector, being conducted by nursing schools, hospitals, health agencies, and professional associations. As a result, its nature is determined by the needs of the sponsoring organization. In a few countries, however, a certain number of hours of approved continuing education is a requirement for licence renewal, and thus regulated by nursing legislation, which may increase its primary health care component.

2.6 Regulations governing nursing practice

The Study Group reviewed legal and voluntary mechanisms regulating the *practice* of nursing. These include nursing practice acts, acts governing other kinds of professional health work, regulations made pursuant to these acts, regulations by ministries of health, the delegation of functions by physicians to nurses by means of "standing orders" issued by medical staff individually or collectively, and action taken by voluntary or professional bodies to approve specialized nursing functions.

2.6.1 *Nursing practice acts and the scope of nursing functions*

The role of nurses in the health service structure of any country is determined in large measure by national or subnational legislation on the practice of the health-related professions. Statutes on the practice of medicine, nursing, and pharmacy, and regulations pursuant to these statutes, as well as public health laws and regulations, define what nurses can do and under what circumstances. While educational institutions and health institutions providing training for nurses and professional nursing associations all have an important influence on the preparation and role of nurses, the law generally establishes the boundaries of nursing functions and regulates the training for them (*17*).

Historically, medical practice acts antedated and set the pattern for laws requiring the licensure or registration of nurses. Medical

practice acts have two purposes: to authorize physicians to practise medicine, and to protect the public against quackery, deception, and professional incompetence (*13, 18, 19*). The scope of legislation on medical practice is all-embracing. It includes all the functions comprised in diagnosis and treatment—from making a hospital bed to performing brain surgery.

Nursing practice acts, termed "friendly" licensure acts, because they are usually enacted with the cooperation of the profession (*13*), are also designed to protect both the nursing profession and the public from unqualified and unethical practitioners (*20, 21, 22*). Some nursing practice acts are mandatory, requiring licensure in order to practise and barring unlicensed persons from nursing practice as defined by the licensure law.[1] Others are permissive, merely prohibiting unlicensed nurses from using the designation "RN" (Registered Nurse), or otherwise representing that they are licensed or registered. Both mandatory and permissive statutes set forth the qualifications required for nursing practice or for identifying oneself as a registered nurse.

Nursing practice acts typically define the practice of nursing in broad, but often vague, terms. The Group concluded that, to determine what a nurse may legally do, not only does the statutory definition of nursing practice have to be considered, but also the regulations of the nursing board or council, the regulations of the Ministry of Health, the ethical standards laid down for the nursing profession, and even the rules or by-laws of individual hospitals. Moreover, legal definitions of nursing practice have authorized striking changes in the scope of nursing practice to include certain diagnostic and therapeutic functions (*23*). More comprehensive educational curricula and supervised practice have prepared nurses to perform more complex tasks and to make critical decisions. Scientific and technological advances have led them into clinical specialities in hospitals. Increased recognition of health care as a basic human right, and steps to guarantee this right, have expanded nursing functions so as to make health care more accessible to people everywhere and to improve its quality. Nevertheless, although significant progress in broadening the scope of nursing practice has

[1] Eighty-five per cent of the 109 countries included in a recent study (*12*) reported that they had mandatory licensing of nurses, thus allowing only qualified nurses to practice. In some countries, however, the power to restrict practice to qualified nurses exists only in the public sector and unlicensed personnel may be employed in private institutions under supervision.

been made in a number of countries, in many others the regulatory mechanisms governing nursing functions have persisted in more traditional form, allowing nurses only limited functions and requiring a prescription or order from a physician for each additional task in nursing care.

The traditional scope of nursing practice may be illustrated by an extract from the mandatory nursing licensing law of the Philippines (Republic Act No. 877, Article IV, Section 17):

> "*Scope of practice of nursing*. A person shall be deemed to be practising professional nursing, within the meaning and intent of this Act, who shall, for a fee, salary, or other reward, or compensation perform a professional service requiring an understanding of the principles and application of procedures and techniques of nursing based on biological, physical and social sciences, including the undertaking of responsible supervision of a patient requiring skill in observation of symptoms and reactions, causes and effects and engaging as nursing instructor in schools and colleges of nursing ...".

Another example of this type of traditional definition is the model licensing law developed in 1955 by the American Nurses' Association:

> "The practice of professional nursing means the performance for compensation of any act in the observation, care and counsel of the ill, injured, or infirm, or in the maintenance of health or prevention of illness of others, or in the supervision and teaching of other personnel, or the administration of medications and treatments prescribed by a licensed physician or dentist requiring substantial specialized judgement and skill and based on knowledge and application of the principles of biological, physical and social sciences. The foregoing shall not be deemed to include acts of diagnosis or prescription of therapeutic or corrective measures" (*24*).

Both these definitions are now considered inadequate for contemporary needs. In the Philippines, nursing leaders have criticized the law as defining nursing functions in a way that is limiting, individual-centred, disease-oriented, and hospital-based (T. F. Corcega, personal communication, 1984). A proposed new law will vastly expand nursing functions in both patient care and health promotion. In 1970, the American Nurses' Association proposed an addition to the definition just quoted to take the role of the nurse practitioner in diagnosis, prescription, and treatment into account:

> "A professional nurse may also perform such additional acts, under emergency or other special conditions, which may include special training, as are recognized by the medical and nursing professions as proper to be performed by a professional nurse under such conditions, even though such acts might otherwise be considered diagnosis and prescription" (*24*).

Since 1971, all but seven states in the United States of America have taken legal action to expand the role of nurses in diagnosis and treatment (*25*).

2.6.2 *Administrative regulations governing nursing practice*

The rules and regulations issued by an administrative agency, often the ministry of health, in conformity with the nursing practice act or under the general authority of the ministry, set forth in greater detail than the statute the functions or tasks that nurses may perform. These rules and regulations have the force of law. Unlike a statute, which can be amended only by action of a legislature or a parliament, regulations under a statute may be readily changed by action of an administrative agency, such as the nursing board or council or the ministry of health, when the need arises.

2.6.3 *Effects on nursing practice of the regulation of other branches of professional health work*

The functions of nurses cannot be considered separately from the functions of other members of the health team, particularly physicians and pharmacists.

The scope of the physician's practice is unlimited, whereas the scope of the nurse's practice is limited by the legal definition of nursing practice. The medical practice act may therefore inhibit the expansion of nursing functions unless there is some form of authorization. Five ways have been suggested whereby legislators might "clarify the role of the nurse so that their country can reap the benefits of nurses performing to the full extent of their capabilities" (L.B. Andrews, unpublished observations, 1984). These are: (*a*) to establish a joint practice committee to determine what tasks nurses may undertake, as has been done in the states of California and Idaho, USA (*26*); (*b*) to allow individual physicians to delegate more functions to nurses; (*c*) to certify nursing specialists who meet certain advanced training requirements; (*d*) to allow nurses to perform expanded functions according to standard protocols; and (*e*) to expand the definition of nursing practice to include diagnosis and management. The members of the Study Group were concerned that, in the absence of some legislative mechanism to authorize changing functions for nurses, the unlimited scope of practice granted to physicians under medical practice acts

may create a legal hazard for nurses, hindering their full participation in health systems based on the primary health care approach.

The pharmacy acts present another barrier to appropriate nursing functions. The customary division of functions with respect to prescription drugs is that the physician prescribes them, the pharmacist dispenses them, and the nurse administers them. An example of the kind of problem this situation creates is found in the area of family planning, in which the prescription and dispensing requirements can impede the wide distribution of contraceptives and hinder access to services. Various devices have been used to deal with the prescription requirement for oral contraceptives. These have included eliminating it altogether, authorizing nurses and other trained health personnel to issue the relevant prescriptions, and requiring an initial prescription from a physician while permitting a non-physician to renew it (*27*). Another approach is to allow village health workers to distribute oral contraceptives, instructing them to seek the advice of a nurse or a physician if side effects develop.

Similar strategies may be used in the case of prescription drugs for the common ailments repeatedly encountered in primary health care. In Dominica, for example, a statute enacted in 1982 authorizes family nurse practitioners to prescribe drugs from the Dominica Family Nurse Practitioner Formulary, a list of drugs for the treatment of common complaints, which is issued by the Medical Board (*28*). Section 60 of this law provides that a registered chemist, druggist, or pharmacist may make up or dispense a medical prescription signed with the name or initials of any duly licensed family nurse practitioner. Another example comes from Bahrain, where nurses are now authorized to prescribe a 24-hour supply of certain drugs in accordance with an agreed protocol.

2.6.4 *Delegation of functions and standing orders*

Historically, the scope of nursing practice has depended in large measure, though not exclusively, on functions delegated to nurses by physicians. One legal authority explains that it has been the aim, in regulating nursing practice, to pick out the aspects of medical care that nurses can competently perform (L.B. Andrews, unpublished observations, 1984). To the extent that this has proved too restrictive, resort has been had in actual practice to various strategies

(see also section 3.3), notably standing orders issued by medical staff, individually or collectively, whereby nurses are authorized to perform certain functions or tasks under specified circumstances. A nurse may also be authorized to act in an emergency beyond her legal scope of practice.

Another means of defining the scope of nursing practice is afforded by "agency policies ... formulated within the statutes under which agencies operate and professional people practise" (J. Flaherty, personal communication, 1984). Institutions or professional associations may also adopt standard protocols to define acceptable nursing practice. Recognition by hospitals and other agencies of the competence and training of health care workers may thus serve to extend nursing functions in practice, if not explicitly in law.

In actual practice, informal devices may be used to permit an extension of the nurse's role. One such device, facetiously called the "rule of the rising sun" or "the reverse Cinderella syndrome", allows hospital nurses on the night shift to perform tasks they are not allowed to perform when physicians come on duty in the daytime (*29, 30*).

2.6.5 *Role of professional bodies*

In some countries, professional bodies are responsible for the certification of specialized nurses. In setting standards for such nurses, specifying their functions, and approving their qualifications, these bodies are performing a regulatory function.

Professional nursing associations also play an important regulatory role in developing and accrediting nursing education. The Group noted that, in a number of countries, the approval of nursing education programmes by statutory bodies is based on the reviews and decisions of professional nursing associations.

2.7 Legal barriers to, and constraints on, nursing training and practice

Legal barriers to the extension of the nurse's role are contained in the statutes and regulations governing professional health care. Traditional *nursing licensing laws* like those cited in section 2.6.1, while authorizing care of the sick, the maintenance of health, and the administration of medicaments and treatment prescribed by the

physician, restrict the evolving role of the nurse in primary health care. With their limited concept of nursing practice they effectively prohibit the nurse from treating common diseases, suturing minor wounds, giving immunizations, providing emergency care, or giving drugs for common diseases. Yet the nurse engaged in primary health care is expected to carry out all these and other tasks, as well as supervising other health workers.

Not only do *traditional definitions of the scope of nursing practice* restrict the functions of nurses, they also restrict their education, generally leading the regulatory body to approve a curriculum designed to prepare them simply for hospital work under the direction of a physician.

The limitations imposed on the evolving role of the nurse by *medical practice acts* and *pharmacy acts* have already been noted (section 2.6.3). Other laws may also circumscribe or inhibit the contribution of the nurse to primary health care: *public health laws* specifying the functions of personnel in health facilities and programmes; *population and family planning laws* regulating the delivery of services; *licensing laws* governing hospitals and other institutions; and *laws regulating payment* for services.

These legal barriers are crucial because they express a restricted concept of nursing practice that has the sanction of law. They reinforce the reluctance of health care institutions and physicians to delegate more functions to nurses in accordance with the latter's capability and the health needs of the people. They raise the possibility of malpractice suits against hospitals, health centres, physicians, and nurses if a nurse exceeds the prescribed scope of practice, even in the absence of negligence. These barriers create a dichotomy between law and practice. Most importantly, they stand in the way of the effective use of health personnel and the development of primary health care.

In 1974, a WHO Expert Committee on Community Health Nursing considered the challenge of adapting community nursing education and practice to the provision of primary health care for all segments of the population. It specified the functions of community health nurses: assessment of individual, family, and community health status and behaviour; identification of health problems and of gaps or deficiencies in resources; implementation of needed services; and evaluation of services in terms of proportion of population served and programme objectives reached. It also recommended a dramatic increase in the diagnostic and therapeutic

responsibilities of community health nurses and called for far-reaching changes in nursing education to prepare them for their expanded roles (*7*).

The members of the Study Group attempted to answer an important and related question. Should the authorized functions of *all* nurses be extended? And should the basic education of *all* nurses be modified accordingly to prepare *all* nurses for expanded roles in primary health care? The Study Group answered both these questions with a unanimous and resounding "Yes".

2.7.1 *Promotive and preventive services*

The historic training of nurses to care for the sick in hospital under the direction of physicians has not been conducive to their participation in preventive work. In some countries, however, specialized nurses are trained for preventive activities in maternal and child health and in public health. While members of the Study Group mentioned examples, such as the Plunkett nurse in New Zealand and the public health nurse in Norway, it was acknowledged that the requisite training may not be feasible in developing countries hampered by limited resources and the need to extend a wide array of preventive services to their people.

Immunizations are a basic public health need, but in many countries nurses are allowed to perform them only under standing orders or in conditions of dubious legality. In Nigeria in the past, for example, some traditional medical functions were performed by nurses but without formal preparation or legal authorization. Now, appropriate training for these functions has been included in the nursing curriculum (S.O. Savage and co-workers, unpublished observations, 1981).

Another area in which an extension of the nurse's role is urgently needed is that of *family planning*. A noted legal authority in this field has pointed out that:

> "Medical practice laws, with rare exceptions, either implicitly or explicitly make examination, diagnosis, prescription and the supervision of treatment the special prerogatives of doctors. Indeed, some laws specifically require that only doctors do the sorts of tasks which relate to family planning. Unauthorized involvement in these duties by non-doctors in punishable under the law.
>
> Nursing legislation and regulations require, in the main, that nurses work subject to the instructions and under the supervision of a doctor. Theoretically, they may not by themselves take the initiative in providing family planning services" (*31*; see also *32*).

Despite the constraint of medical practice acts, there is "a worldwide trend to utilize non-physicians to carry out family planning functions once reserved for doctors", and "evaluations in many countries have demonstrated that properly trained nurses and auxiliary nurses can perform the routine family planning tasks, including insertion of IUDs, as capably as physicians" (*33*; see also *34–36*). In fact, there is now general agreement that properly trained nurses are eminently qualified to carry out procedures relating to family planning that require a high degree of skill (*37*).

Nutrition services are essential in primary health care. No legal barrier prevents nurses from advising patients on nutrition and training them in the preparation of nutritious food from available resources. Current nursing training generally includes courses in general nutrition and therapeutic nutrition. These should be strengthened to cover not only technical knowledge but also the interpretation of behavioural and cultural attitudes, where relevant, and resource assessment as appropriate to the particular country.

All health personnel involved in primary health care are concerned with *sanitation and environmental health*. Nurses are no exception, and the Group agreed that with proper training they can motivate communities to work with sanitarians and personnel in other sectors concerned with housing, pure water supply, sewage disposal, and other aspects of environmental health.

Also associated with the provision of primary health care are *epidemiological activities*. Nurses may be in a particularly advantageous position to pick up clues to the incidence and causes of disease if they have had adequate training in the epidemiological approach. They have a crucial part to play in helping communities to look at themselves epidemiologically and carry out their own community diagnoses, and also in identifying major risk factors and helping communities to analyse them. These epidemiological activities on the part of the nurse can enable the communities concerned to achieve self-reliance in health development.

The *health education* of individuals and communities is fundamental to all preventive work. The nurse must be trained to mobilize communities for health education and to help individuals and communities to identify their own health problems and find solutions to them. A definition of nursing proposed in 1982 by the Nurses' Association of Thailand for incorporation in the country's new Nursing and Midwifery Acts duly emphasizes this aspect of the nurse's role:

"Nursing is all actions concerned with health promotion; disease prevention; ... assisting the patient to practise self-care, including consultations, and teaching patients to care for themselves at home in order to be able to carry out the daily normal activities in their social life."

2.7.2 *Curative services*

The way in which the intrinsic role of nurses has been limited not only by their training but by the legislation governing medicine and pharmacy is particularly apparent with regard to curative services. Medical practice acts generally make treatment, even of *common disorders* (communicable diseases, diarrhoeal diseases, enteric diseases) and *accidents*, a function of the physician, and the nurse is authorized only to implement the physician's instructions, as given for an individual patient or in a standing order.

In a recent analysis of a proposed Royal Decree of the Ministry of Health and Consumer Affairs of Spain on nursing functions, the following argument was advanced (L.B. Andrews, unpublished observations, 1984). Nurses are trained for early *disease detection* and for assessment of the condition of the patient who is ill. Since 50–80% of primary care practice is based on between 8 and 12 main complaints (*38*), and it is possible to devise a dozen or so protocols that could be used by nurses in most cases of primary health care (*39*), it is reasonable to authorize nurses to treat common diseases. Proper safeguards can be provided through more comprehensive training of nurses and administrative arrangements for consultation and referral.

Examining the possibility of expanding the role of nurses, the Colombian Nurses' Association found that it was possible to give nurses more autonomy in their work. In the transitional period, until such autonomy is granted, work in health teams in under-served areas will provide them with opportunities to exercise new curative functions.

Medical acts also generally bar nurses from *dealing with trauma* and *performing minor surgery*, except in an emergency. Nurses working in emergency wards where a physician is present do of course carry out a wide range of highly technical tasks, and in many countries they are authorized to perform them on their own (*23*). The Study Group noted the view, expressed in a statement from the West African College of Nursing in 1984, that the functions of nurses in the developing countries should be similarly extended:

"Nurses have been identified among all health care professions as the backbone of the PHC [primary health care] strategy at all stages and levels, especially if nurses were properly prepared, fully deployed and their potentials identified and utilized to the maximum ...
The nurse can perform at a higher level and with greater scope in the health care delivery system than the existing regulations stipulate."

It is extremely important that nurses providing primary care should be entrusted with the *prescription of drugs for common diseases*, as well as advising on the safe use of over-the-counter drugs. The legal obstacles to the exercise of this function and ways of overcoming them have already been mentioned (section 2.6.3).

Gaps or deficiencies in nursing functions in primary health care also exist in *laboratory and X-ray services* and in the use of physical procedures, such as exercise, heat, and splinting. The Study Group noted that, in one country, the lack of enabling legislation has prevented nurses from signing not only drug prescriptions, but also X-ray requests and laboratory examination forms (*12*). Personnel trained in the relevant specialities are often lacking in rural areas. In the past, before allied health personnel began to specialize, nurses were accustomed to providing the above-mentioned services, and they still do so in small hospitals in some countries. Training and authorizing nurses to provide them will be of enormous benefit to the community.

In a recent study of the development of human resources for primary health care in six developing countries, it was found that policies restricting nursing functions to those carried out under medical supervision were changing:

"Nurses are being taught procedures formerly reserved for doctors—injections, blood pressure, surgical dressings. In special supplemental courses (one to three months) after basic training, they are also sometimes taught to identify common diagnoses and give appropriate treatment—such as infant diarrhoea and oral rehydration. Midwives and nurse-midwives are learning about family planning methods, including insertion of intrauterine devices ..." (*40*).

2.7.3 *Primary health care management*

While both legal authorization and further education may be prerequisites for the exercise of preventive and curative activities, the management of primary health care services simply requires additional training. There is no legal barrier to prevent nurses from planning, organizing, and evaluating such services. Although the traditional nursing curriculum prepares nurses for the management

of nursing services in hospitals and institutions, it rarely prepares them for the management of primary health care activities in communities.

To be fully effective in primary health care, the nurse must be equipped to help communities in planning health services. This means assessing individual and community health needs, setting priorities for health services for the community, promoting intersectoral collaboration, and determining how community resources should be developed and used.

The organization of services geared to primary health care involves a number of activities for which the nurse must be prepared. These include: leading and supervising the health team; training auxiliaries and community health workers; maintaining health records; procuring and storing drugs and supplies; referring patients to other sources and levels of care, with appropriate reports; using health and epidemiological information; coordinating the development of primary health care in the community with activities in other sectors (housing, education, agriculture, social welfare); and promoting community outreach and participation.

In addition, the community health nurse must be trained to evaluate health services. This involves setting criteria or indicators for evaluation, monitoring services, identifying new or continuing needs of individuals and communities, and, finally, utilizing the findings as a basis for planning.

While no legal impediment prevents community health nurses from performing these management functions, regulations may still be helpful in promoting desirable changes in nursing education. The change of direction from hospital nursing to community nursing is so great that regulations may be needed to formulate policy and to promote the basic training of nurses to deal with the promotive, preventive, curative, rehabilitative, and management activities involved in primary health care.

2.7.4 *Institutional settings for nursing education*

The Study Group identified three major problems in the use of institutional settings for nursing education. Firstly, nursing education is located predominantly in *hospitals*. The licensing laws governing the nursing profession approve or recognize hospitals as providers of nursing education, and other places—health centres and community health agencies—are generally not so recognized.

Hospital training is, of necessity, quite different from the training required for community health work, and neither the theoretical nor the practical training provided for nurses in hospitals may be adapted to primary health care. The hospital-trained nurse may know a great deal about sophisticated clinical medicine, but not enough about dealing with common diseases and health promotion—the core of primary health care.

Second, nurses may be taught in an *academic establishment attached to a hospital* where they may gain clinical experience. While strengthening the theoretical component of nursing education, this kind of teaching has failed to extend students' clinical experience to take in primary health care. The provision of nursing education in academic establishments and hospitals means that few nursing instructors have had direct experience of primary health care in the kind of setting in which it is actually carried out. Nurse teachers are rarely equipped to teach the concept and essential components of primary health care.

Third, although some clinical experience may be available in *institutions providing ambulatory-care*, such as health centres, it is usually brief and may consist only of observations. Nurses are rarely trained in health posts or health stations. The community, however, has enormous potential as a source of learning.

2.7.5 *Constraints on training for changing nursing functions*

While the Study Group was primarily concerned with regulatory mechanisms affecting the education and practice of nurses with respect to primary health care, other barriers to the extension of the nurse's role were also considered important. In fact, some of these other barriers explain the widespread failure to modify the regulatory mechanisms governing nursing education and the scope of nursing functions to meet the needs of health systems based on the primary health care approach. These barriers may be described as *attitudinal*, *sociopolitical*, and *economic*.

Resistance to change is a common characteristic of all groups in society, and nurses and physicians are no exception. Trained in traditional programmes to work under the direction of physicians, many nurses are understandably reluctant to make decisions independently in the absence of clear authorization. Similarly, many physicians, accustomed to being the only ones to use a stethoscope (except for taking blood pressure), to do a vaginal examination, to

make a diagnosis, or to prescribe drugs, are reluctant to yield these prerogatives. Medical practitioners may undervalue the importance of primary health care, and nurses may not be fully aware of what the role of nursing should be in primary health care. These *attitudes* have been perpetuated by the traditional curricula of nursing schools oriented to training nurses for hospital service. Traditional medical school curricula also perpetuate the outmoded stereotype of the nurse serving solely as a resource to the physician, rather than to the patient or client.

The continuation of *traditional training programmes* is associated with a shortage of nursing instructors trained in the primary health care approach. The majority of nurse educators have no grounding in public health work and, never having set foot in the community, do not know how to find out about people's life-styles and environments, how to get people involved in their own health care, or how to work with people to discover the cause of their problems and help deal with them (M.-F. Collière, unpublished observations, 1984). Moreover, the fellowships granted to nurse educators are often for further training along traditional lines or for training in clinical nursing specialities. According to a former WHO nurse:

> "... as long as schools of nursing continue to emulate and try to meet the standards of overseas countries (impact of principals of schools geared to hospital needs and the requirements for admission for advanced training overseas), and as long as doctors and the public rate performance by the hospital nurse, there will be very little change in direction in nursing schools" (M.E. Leavy, unpublished observations, 1984).

Recognizing the need for changes in the preparation of nurse teachers and nurse managers, the WHO Expert Committee on Education and Training of Nurse Teachers and Managers with Special Regard to Primary Health Care recommended in 1983 that:

> "Action should be taken immediately to reorient all post-basic programmes for nurse teachers and managers so that the principles of the health for all goal through primary health care become the unifying conceptual frame of reference" (9, p. 44).

In connection with the reorientation of post-basic nursing education, the Expert Committee emphasized the necessity to:

> "identify and take action to achieve any changes needed in statutory (legal) requirements in respect of nursing education and/or nursing practice" (9, p. 43).

Closely related to the attitudes of members of the nursing and medical professions are the *sociopolitical* factors that impede the

extension of the nurse's role. The traditional hierarchy in the health system that allocates power to physicians and professional managers tends, at the same time, to exclude nurses from the decision-making process or at least to limit their participation in it. Fortunately, the trend of nursing licensing or registration boards is to require a majority of their members to be nurses. Otherwise, much remains to be done as regards giving nurses a decisive role in the management of health care institutions and community health services.

Another important barrier is the system of *financing health care*. Where nursing services are part of an institutional budget and only physicians are funded for curative services, the fiscal system limits the evolution of nursing functions. Also, government limitations on the number of community nursing posts available affect the role of the nurse. Since nurses are generally salaried staff, if there are few openings for them in community health, opportunities to develop the full range of nursing functions necessary for primary health care will also be few.

In some countries, economic factors may hinder the expansion of the nurse's role. The influence of the supply and distribution of physicians on the utilization of nurses has already been mentioned: a plentiful supply of physicians is an impediment to the broadening of nursing functions, while a poor supply tends to promote the training of nurses in primary health care. But an adequate supply of physicians does not necessarily ensure that they will be available to the whole population, for rural areas may still remain underserved. Where nurses are in short supply in relation to the number of physicians, the tendency may be to prevent the extension of the nurse's functions and to reserve to the physician functions that, in a rational system, should be performed by the nurse.

In some countries, the low pay offered by the public health and primary health care services, as compared with the rewards of clinical specialization, acts as a deterrent to nurses who might otherwise take up primary health care. A further deterrent is the fear of isolation, poor living conditions, and general lack of support for health activities, especially in rural areas.

3. STRATEGIES FOR ADAPTING AND REORIENTING NURSING EDUCATION AND PRACTICE TO PRIMARY HEALTH CARE

The need to equip nurses for their role in primary health care, as outlined above, is now recognized in virtually every country. In some countries legislation has already been enacted to this end. In others, proposals for the necessary changes are under consideration. The Study Group reviewed various strategies for effecting these changes.

The success of these strategies depends on sound leadership. WHO recognizes the urgent need for the formation of a nucleus of leaders for the "Health for all" movement. These leaders, including nurses, should be active in policy making for health, influencing governments, nongovernmental organizations, and other health-related groups at all levels, and should be concerned with allocation of funds, setting of priorities and taking the appropriate decisions.

3.1 Regulation of nursing education for primary health care

Generally, some official action—either a statute or regulations issued by the Ministry of Health—is necessary to initiate the new type of nursing education, required to ensure the full participation of nurses in primary health care.

Mention has already been made of the National School of State-Registered Nurses in Senegal, which was established by decree in 1977 to provide training realistically adapted to the country's health problems, with special emphasis on the needs of the rural population. The wide range of subjects prescribed in the 3-year curriculum include tropical diseases, public health, and health education, in addition to more traditional nursing subjects.

Legislative control of nursing education may also involve the *updating of educational programmes* or trials of educational innovations. For example, it has been proposed that the Liberian Board for Nursing and Midwifery should be required to review the nurse practice act in the light of new trends and demands in the practice of nursing and midwifery (R.L. Marshall, personal communication, 1984). An interesting legal provision in Nigeria (Nurses' Decree 1970, section 4) permits the Nursing Council to improve the methods employed in the basic and postbasic education of nurses and to undertake trials of new kinds of training and examination.

In the United Kingdom, a project named "Project 2000" is taking a fresh look at nursing education on the basis of an analysis of the health care needs of the people and the training required by nurses in order to meet these needs.[1] This may point the way to an appropriate reorientation of the regulations governing such training.

3.2 Legislative strategies to expand nursing functions

In the absence of a statute governing nursing practice, it is difficult to establish and maintain standards of nursing care. Each institution and agency is free to set its own standards, and no legal basis is established for the nurse's functions. On the other hand, legal recognition of what nurses are trained and authorized to do protects both the nurse and the public.

3.2.1 *Definitions of nursing practice*

New legal definitions of nursing practice take different forms. One form of definition *specifies* the functions that the nurse may perform on her own and those that she may perform under the direction or supervision of a physician. Another form *authorizes* a range of activities geared to the nurse's exercise of professional judgement in the provision of primary health care.

Examples of definitions of nursing practice providing for a specific, qualified range of functions are found in Ghana and Luxembourg. In Ghana, the Nurse's Regulations of 1971 provide for three kinds of nursing function: (*a*) treatment that a nurse may perform without instructions from a doctor; (*b*) treatment that a nurse may perform only with sanction of a registered medical practitioner (not necessarily in his presence), given in writing and dated on the patient's treatment form; and (*c*) treatment that nurses may perform only in the presence of a registered medical practitioner and with his sanction. Thus, nurses are authorized to administer common drugs for relief of pain without a physician's order, but they may administer other drugs only if ordered to do so by a registered medical practitioner. They are not authorized to prescribe drugs (*17*).

In Luxembourg, under a Grand-Ducal Regulation of 1983, the functions of the nurse are similarly divided into those that the nurse

[1] A project of the United Kingdom Central Council for Nursing, Midwifery, and Health Visiting.

may perform on prescription or medical advice and those that form part of the intrinsic role of the nurse. Annexed to the Regulation is a list of professional techniques that may be exercised on prescription or medical indication.

In France (*41*), legislation enacted in 1978 accorded nurses a more independent role and departed from the former concept of nursing as an auxiliary medical profession providing nursing services only on medical instructions. Subsequently, a 1981 decree, issued pursuant to the 1978 legislation, listed professional acts of the nurse and the conditions under which nurses may perform them. In 1984, new legislation replaced the 1981 decree in order to accord more authority to the nurse. Thus, in France, there are the services the nurse may undertake on her own initiative, those she may perform on medical instructions, those she may perform in the presence of a physician (who may intervene at any moment), and those she may undertake, in the absence of a physician, on written protocols for emergency care which have been determined in advance on the instructions of a physician. More generally, the nurse in France is authorized to propose, organize, and participate in preventive and educational activities aimed at individuals and groups, the detection of cases of certain conditions, the training of nursing personnel, research in nursing care, epidemiological investigation, and other activities; and to collaborate with personnel in other branches of health and social work. The harmonization of the laws of Member States of the European Community has confirmed the wider role of French nurses in detecting disease and disability, conducting research in nursing care, working in occupational health and safety, and providing preventive services and health education.

The orientation of nursing practice to primary health care by redefining the nurse's role is illustrated by legislation enacted in the Republic of Korea in 1980, which authorizes community health practitioners (nurses or nurse-midwives, who have completed a course for community health practitioners) to treat common medical problems, provide preventive services, and promote comprehensive health care for the rural population. The purpose of the law is to improve the health level of people in underserved areas. To this end, Korea has already trained nearly 2000 community health practitioners to become a new type of nurse who is far more independent and resourceful (Mo-Im Kim, unpublished observations, 1984).

In the USA, a number of states have enacted new definitions of nursing practice. The following definition, for example, is applicable in the states of New York and New Jersey:

> "diagnosing in the context of nursing practice means identification of and discrimination between physical and psychosocial signs and symptoms essential to effective examination and management of a nursing regime" (*25*, pp. 57–58).

The state of California authorizes wider functions for the nurse in patient care without employing the concept of a diagnostic or therapeutic nursing regime (*25*, p. 60).

In the first reported judicial interpretation of a broadly worded, modern nursing practice act in the USA, the Missouri Supreme Court held that a broad statutory definition of nursing practice authorized an enlarged scope of practice without the need for further legislation or regulations. The issue in the case (Sermchief, v. Gonzales) was whether nurses had the authority to perform diagnostic and treatment functions in family planning services, including breast and pelvic examinations, pregnancy testing, Papanicolaou smears, gonorrhoea cultures, blood serology, the administration of all kinds of contraceptive methods, and the counselling and education of patients. The Missouri court held that the acts performed by the nurses were within the scope of nursing practice as laid down in the 1975 statute. It pointed out that the wisdom of the new legislative language was that it did not freeze the concept of nursing practice into the fashions of today's or yesterday's scientific literature by providing a statutory list of functions acceptable in nursing practice. The tenor of the decision is the recognition of nursing as a profession with its own rights and responsibilities (*42*, *43*).

Enacting a general definition rather than a list of specific functions has the advantage of permitting any future change in the scope of nursing practice to be effected by administrative action, instead of having to amend a law, which is usually a lengthy procedure. The Study Group accordingly concluded that a general definition of the scope of nursing practice can accomodate new nursing functions as they are justified by expanded education or improved technology.

3.2.2 *Regulations on specific primary health care tasks*

Either in combination with a new definition of nursing practice or under a traditional definition, a statute or regulation may

authorize the performance of specific tasks by nurses to enable them to provide primary health care.

A number of examples may be cited. Unpublished information available to the Study Group indicated that in Indonesia, the Ministry of Health has authorized community health nurses, trained since 1975 in schools of nursing, to carry out the following tasks: normal deliveries; family planning, including the insertion of IUDs; prescription of oral contraceptives and drugs for diarrhoeal diseases; and emergency care, including the application of bandages and splints and cardiac resuscitation.

In Israel, a set of regulations issued by the Ministry of Health in 1977 authorizes registered nurses to carry out two kinds of medical activity: (*a*) those regularly needed in hospital and community care, such as drawing blood for tests, catheterization, immunization, and suturing wounds; and (*b*) those involved in emergency and intensive care, conducted in hospitals only (R. Bergman, personal communication, 1984).

Legislation for expanded nursing education and practice is usually formulated as regulatory legislation governing the profession; it may, however, be enacted not as part of the nursing law, but as special legislation. For example, in the Republic of Korea special legislation for the health care of rural populations provides for community health nurse practitioners with a range of specific primary health care tasks. It is anticipated that practitioners of this type may, in the future, appropriately serve as school nurse practitioners or industrial nurse practitioners.

In Spain, the first step to legalize the role of community health nurses was taken in 1984 with the enactment of a statute governing the functions of nurses in the social security system. Under this statute, services in the community and in ambulatory care centres will be provided by the same nurse. The role of the nurse is broadened to include disease prevention, health promotion, and rehabilitation, and provision is made for the nurse to work in a health team. Also, in Spain, a proposed Royal Decree of the Ministry of Health sets forth the activities of nurses as follows:

> "... through actions leading to health promotion, to the improvement of social and physical environment, to protection against illness and accident, to the observation, assessment, and evaluation of people's conditions, to the rehabilitation of persons and to assistance in illness and death. These activities include, but are not limited to, the provision of evaluation and treatment

through the application of nursing techniques or through the use of standard protocols ...".

In Sweden, an order issued in 1976 by the National Board of Health and Welfare authorizes nurses who are practising child health, school health, or district nursing, and who have had further training in out-of-hospital medical care or in the medical care of children and adolescents, to give opinions concerning vaccination and to administer vaccines (*44*). Nurses with other training but with long experience in vaccination may be deemed qualified for this function. Where vaccinations are not part of a prescribed general programme, such as immunization against influenza or mumps, then they may be carried out by nurses only after a medical opinion given in each individual case by a physician.

In Thailand in 1975, the Ministry of Public Health issued rules and regulations authorizing nurses and other personnel to perform minor curative tasks. The list of these tasks is extremely detailed and covers specific aspects of medical, surgical, obstetrical, and emergency care. The regulations were issued under a traditional definition of nursing practice that was deemed broad enough to encompass new functions. A revised definition of nursing practice has been proposed.

In the United Kingdom, regulations issued in 1983 under the Nurses, Midwives and Health Visitors Act of 1979 provide for courses to enable nursing students to acquire the competence required to advise on the promotion of health and the prevention of illness; to devise a plan of nursing care based on an assessment of the patient's condition, enlisting the cooperation of the patient as far as possible and taking medical prescriptions into account; to implement a planned programme of nursing care; and to undertake the management of a group of patients over a period of time, organizing the appropriate support services. These rules have been interpreted as authorizing the concept of primary health care as the basis of all curricula for courses leading to registration as a nurse (P. Wright-Warren, unpublished information, 1984).

3.3 Administrative strategies of institutions

3.3.1 *Standing orders, policies, and protocols*

As already mentioned (see section 2.6.2), several administrative devices have been used to compensate for the restrictions on nursing

functions imposed by acts governing the practice of the health professions. Standing orders of physicians and policies and protocols of hospitals and health centres are such devices. Even when regulatory mechanisms fully recognize the evolving role of the nurse, these devices may still be necessary for certain new functions.

The Study Group emphasized that standing orders should not be the decision of individual physicians but rather should be endorsed by the relevant institution as institutional policy. The Study Group further emphasized the individual responsibility of nurses for exercising their own professional judgement in the circumstances prevailing, even when acting under the authority of institutional policies and protocols.

3.3.2 *Job descriptions*

The job description for an individual post in primary health care should be full enough to indicate clearly what is required in the job. Flexibility is necessary to enable the practitioner to meet changes in health care needs. This flexibility should be achieved, however, not by couching the definition in vague terms, but by means of regular work studies and periodic reviews to enable the job description to be updated and reflect changing requirements.

4. IMPROVING THE EDUCATION AND PRACTICE OF NURSES IN HEALTH SYSTEMS BASED ON THE PRIMARY HEALTH CARE APPROACH

These regulatory changes to broaden the education and extend the functions of nurses will help to ensure that nursing services provide primary health care. In countries where community health workers are in good supply, there is often a serious lack of supervision. Leadership at the district level is also an urgent need. Nurses trained in educational programmes incorporating instruction in the planning and delivery of primary health care can provide both supervision and leadership. These two functions of the community health nurse will help to make essential health care more widely accessible and also improve the quality of the care provided.

The Study Group emphasized that the functions of nurses in primary health care are a natural evolution of their usual role. These functions derive from the health needs of the population and the

health service requirements of the country. The functions of nurses, and especially their tasks, are greatly influenced by the nature, types, and distribution of available health manpower in the country.

4.1 Assessment of a country's health needs

A preliminary step towards improving the education and practice of nurses in health systems based on the primary health care approach is to analyse the country's health needs and the adequacy of the existing educational programmes. Are nurses appropriately prepared for the functions they are called on to perform in primary health care? Are the regulations for their practice sufficiently broad to cover their current functions and sufficiently flexible to allow for new functions that may be needed in the foreseeable future? Is there clear and unequivocal legal authorization for the different functions?

4.2 Development of policy and legislation

The principal legal restriction that prevents nurses from making their full contribution to primary health care stems from the definition of a number of tasks, including the prescription of drugs, as being the exclusive prerogative of the physician.

A step towards removing this legal barrier—a step already taken by a number of countries—is to change the legal definition of the scope of nursing practice to include the functions needed in primary health care. The members of the Study Group agreed that such a definition may be framed in quite general terms, or it may list the specific functions authorized. If a general definition is adopted, specific guidelines may be set out in other instruments—in regulations of the nursing board or combined boards, in voluntary joint practice agreements of the nursing and medical professions, or in standard protocols of agencies and institutions.

A definition of nursing practice authorizing a wider range of functions is a necessary, but not a sufficient, condition if nurses are to play a more effective part in health systems based on the primary health care approach. A further step would be to change the regulatory mechanisms governing nursing education so that basic nursing education has to correspond to the need for promotive, preventive, curative, rehabilitative, and managerial services in primary health care. The requisite changes may be achieved through legislation or regulations for revised educational curricula. This

legislation should deal with both the theoretical and the practical training of nurses. It should require clinical training to be conducted not only in hospitals but also in institutions offering ambulatory care —e.g., health centres and health posts—and in communities. Practical experience should be required in both urban areas and rural communities.

Basic nursing education should aim at training a generalist nurse able to function in all settings and with every type of client. Specialized training in nursing should come after the generalist training. It, too, should be reoriented towards a holistic, primary health care approach.

To accomplish these changes in the legal and educational systems governing nursing, the cooperation of government departments, health service authorities, educational institutions, and the health professions will be necessary. Their joint efforts can produce legislation appropriate to the situation in each country. This legislation may open the door for primary health care functions that do not require legislation but are encouraged by it. The Study Group anticipated that it will enable nurses to express their full commitment to primary health care and to serve as catalysts, facilitators, and community health motivators.[1]

Once policy is determined, the legislation authorizing nurses to perform the functions required in primary health care should be drafted. The involvement in this process of government departments, licensing boards for nursing and medicine, accrediting agencies, professional organizations for the nursing and other professions, and representatives of the public will ensure useful exchanges of information and promote support for the legislation.

Next, the primary responsibility for the design of basic and continuing nursing education should be assigned to nurses and nurse educators. They may wish to have the advice and support of other groups in revising nursing training to meet the needs of primary health care. Particularly important will be the cooperation of the health services in providing practical experience for training nurses

[1] For a discussion of the challenge presented to the nursing profession by the development of primary health care, see: MANGAY MAGLACAS, A. Integration of essential components of primary health care into post-basic curricula. Copenhagen, WHO Regional Office for Europe, 1984 (unpublished document ICP/HSR 303 m02/7, presented at the Symposium on Post-Basic and Graduate Education for Nurses in Europe, Helsinki, 4–8 June 1984).

in health centres, health posts, and the communities where people live.

4.3 Information and education of the public and policy-makers

As changes in nursing functions and education often prove controversial, it is important that parliamentarians and other policy-makers should be fully informed of the importance of these changes. Citizens and consumer groups can be helpful in explaining problems of access to and continuity of care. Nursing leaders, nursing educators, concerned lawyers and citizens, and women's and church groups can all participate in education of the public.

4.4 Need for continuing education

There is an overwhelming need to equip all teachers of nursing with training and experience in primary health care. Most of these teachers are hospital-trained and oriented. Retraining would be helpful for many of them, and resources must be provided to ensure that the necessary reorientation can take place. Crash courses for teachers would help to bring them into line with the primary health care movement now in progress in various countries. The establishment of a continuing education system can ensure that teachers and managers at educational institutions and health service agencies update their knowledge and skills so that they can give the necessary support to developments in primary health care.

4.5 Guidelines for an overall strategy to achieve legislative changes

The Study Group reiterated the opinion that the *review of regulatory mechanisms* in the light of needs of primary health care is itself a strategy for changing nursing education and practice. An important aid would be a guide that nurses and others could use strategically to produce a positive change in the regulatory system. The Study Group discussed the nature of such a guide and its possible contents, including a consideration of the different stages in the process of achieving legislative change. These are as follows:

(*a*) identifying the issues or needs that have to be addressed;
(*b*) informing and educating the public at all levels to enlist support for the proposed change;
(*c*) drafting and submission of legislation and regulations;

(*d*) lobbying for adoption of new legislation and regulations;
(*e*) monitoring and review of new legislation and regulations.

The Study Group agreed that it would be desirable to have detailed guidelines for use by nurses, professional associations, educational establishments, regulatory and other relevant bodies, and consumer organizations as a basis for achieving legislative changes in nursing education and practice.

5. CONCLUSION

The effective regulation of nursing training and practice to support primary health care is long overdue. More than eight years have passed since the World Health Assembly adopted its resolution (WHA 30.34) setting the goal of health for all citizens of the world by the year 2000. More than a decade has passed since the WHO Expert Committee on Community Health Nursing recognized the diagnostic and therapeutic responsibilities required of community health nurses and outlined their broad role in primary health care. In the years since these far-seeing actions, however, the reorientation of nursing education and practice in the direction of primary health care has proceeded only slowly.

The urgent health needs of underserved populations call for positive measures to bring about the full participation of nurses in primary health care. The willingness of nurses to assume increased responsibility has been demonstrated by their impressive contributions in the area of primary health care even under the handicaps of inappropriate training and insufficient authority, to say nothing of limited resources. The means to correct this situation are at hand. Changes in the regulations governing nursing education and practice can open the way to harnessing the full potential of nurses in the development of primary health care services.

In urging prompt and effective action by countries, educational institutions, professional associations, and WHO to strengthen the regulation of nursing education and practice relating to primary health care, the Study Group echoed the statement of the Director-General of WHO in 1985:

"If the millions of nurses in a thousand different places articulate the same ideas and convictions about primary health care, and come together as one force, then they could act as a powerhouse for

change. I believe that such a change is coming, and that nurses around the globe, whose work touches each of us intimately, will greatly help to bring it about. WHO will certainly support nurses in their efforts to become agents of change in the move towards health for all" (*45*).

6. RECOMMENDATIONS

The Study Group recognized the key role of nurses in providing primary health care. As the most numerous, and sometimes the only, professional health personnel available to under-served populations, nurses carry an enormous responsibility for the attainment of "Health for all by the year 2000". The scope of nursing functions has expanded dramatically in a few countries, but is restricted in many others by legal and other barriers. Countries have to develop an overall strategy for strengthening the regulatory mechanisms to promote the education and practice of nurses in primary health care, including the removal of barriers to their effective utilization. The Study Group made the following recommendations.

6.1 Regulating nursing education

The Study Group recommended that countries and regulatory bodies governing nursing should reorient the regulatory mechanisms for basic nursing education to prepare all nurses for an expanded role in primary health care as determined by countries' particular health needs.

To give effect to this recommendation, it will be necessary to:

(*a*) initiate changes in the content of the basic nursing curriculum to incorporate the concepts of primary health care, ensuring that education, including field practice, is provided in the essential elements of primary health care in accordance with the defined scope of nursing practice;

(*b*) provide nurses with training in midwifery, in those countries where traditional birth attendants and auxiliary midwives practise midwifery, to ensure their competence in this area and enable them to teach and supervise traditional birth attendants and auxiliary midwives;

(*c*) provide financial and other resources to support the reorientation of educational programmes for nurses to primary health care.

6.2 Redesigning educational programmes

The Study Group recommended that educational institutions design educational programmes to prepare nurses for practice in primary health care.

To give effect to this recommendation, it will be necessary to:

(*a*) plan the curricula of such educational programmes in collaboration with health service personnel, community representatives, and other health-related sectors;

(*b*) orient all teaching staff involved in such programmes to primary health care and ensure their continuing education in this area;

(*c*) establish a system to evaluate such programmes, and the graduates, in order to determine whether the training and deployment of the graduates are appropriate for the purpose of meeting the country's health needs.

6.3 Regulating nursing functions

The Study Group recommended that countries and regulatory bodies reorient regulatory mechanisms governing the functions of nurses to promote their full contribution to primary health care.

To give effect to this recommendation, it will be necessary to:

(*a*) review the utilization of nurses in primary health care, develop a plan for achieving the regulatory mechanisms necessary for their full participation in primary health care, and provide an appropriate budget for the purpose;

(*b*) analyse current provisions regulating the practice of nursing, medicine, dentistry, pharmacy, and other health-related professions to identify deterrents to nursing practice in primary health care and take action to eliminate such deterrents;

(*c*) enact legislation containing a general statement of the scope of nursing practice that is sufficiently broad to encompass the practice of nurses in all the essential elements of primary health care, and affirm by statute, regulations, or other means the responsibility of nurses for performing preventive and curative functions in primary health care as part of their nursing role;

(*d*) set forth in regulations all the essential functions that nurses working in primary health care need to perform, especially those relating to immunization, the management of common illnesses, the

provision of family planning services, and the prescription and administration of selected drugs for common conditions;

(*e*) revise periodically the regulations governing nursing functions as new needs arise and skills evolve.

6.4 Strengthening nursing boards

The Study Group recommended that countries vest the regulation of nursing education and practice in a nursing board or council.

To give effect to this recommendation, it will be necessary to:

(*a*) specify the functions of the nursing board or council, including approving training institutions and field practice areas, establishing admission requirements, prescribing the duration and content of curricula, administering licensing examinations, and exercising disciplinary functions over the profession;

(*b*) ensure that emphasis is placed, in the regulations, interpretations, and decisions of the nursing board or council, on promoting the development of the full range of nursing functions required in primary health care; and strengthen the capabilities and commitment of the members of the board or council, by providing them with opportunities for better understanding of primary health care as the key to the attainment of the goal of "Health for all";

(*c*) provide that the majority of members of the board or council shall be nurses elected by the profession or appointed from nominations made by organizations representing nurses, and that the chairperson of the board or council shall be a nurse;

(*d*) where a nursing board or council as described above does not yet exist, specify, in transitional arrangements, the time limit and mechanisms for setting up such a regulatory body for nursing education and practice;

(*e*) promote work studies of health personnel and review job descriptions, revising them, where necessary, to reflect the functions required in order to utilize the full working potential of all health personnel engaged in primary health care.

6.5 Strengthening the role of national nursing organizations

The Study Group recommended that national nursing organizations give priority to assisting with the revision of the legislation and regulations governing nursing education and practice so that they support primary health care; and provide leadership in

educating parliamentarians, other policy-makers, and the public on the role of nurses in primary health care, including use of the report sponsored by the International Council of Nurses under the title *Project on the Regulation of Nursing 1984* (*12*).

6.6 The role of WHO

The Study Group recommended that WHO collaborate with its Member States in strengthening the regulatory mechanisms governing the education and practice of nurses for primary health care.

To give effect to this recommendation, it will be necessary for WHO to:

(*a*) undertake a review of nursing education programmes and the operation of nursing legislation to determine whether they achieve the goal of improving access to, and the quality of, primary health care;

(*b*) develop guidelines for use by nurses, professional associations, educational establishments, regulatory and other relevant bodies, and consumer organizations as a basis for regulatory changes governing nursing, education and practice to enable nurses to make their maximum contribution to primary health care.

ACKNOWLEDGEMENTS

The Study Group acknowledges the special contributions made to its deliberations by the following WHO staff members: Ms L. Diaz, Regional Nursing Officer, WHO Regional Office for the Americas, Washington, DC, USA; Mr S.S. Fluss, Chief, Health Legislation, WHO, Geneva, Switzerland; Dr K.S. Lee, Scientist, Primary Health Care, WHO Regional Office for the Western Pacific, Manila, Philippines; Dr L. Mehra, Senior Medical Officer, Division of Family Health, WHO, Geneva, Switzerland; Mrs Saiyud Niyomviphat, Regional Nursing Adviser, WHO Regional Office for South-East Asia, New Delhi, India; Mlle J. Perron, Regional Nursing Officer, WHO Regional Office for Africa, Brazzaville, Congo; Miss E. Stussi, Nursing Officer, WHO Regional Office for Europe, Copenhagen, Denmark; Dr H. Tala, Consultant, Division of Noncommunicable Diseases, WHO, Geneva, Switzerland; and Professor E. Abou Youssef, Consultant, WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt.

REFERENCES

1. WHO. *Handbook of resolutions and decisions of the World Health Assembly and the Executive Board*, vol. II. Geneva, World Health Organization, 1985, p. 1.
2. WHO. *Alma-Ata, 1978. Primary health care*. Geneva, World Health Organization, 1978 ("Health for All" Series, No. 1).

3. WHO. *Handbook of resolutions and decisions of the World Health Assembly and the Executive Board*, vol. I. Geneva, World Health Organization, 1973, p. 50 (resolution WHA1.46).
4. ILO. *Employment and conditions of work and life of nursing personnel*. Geneva, International Labour Office, 1976 (Report VII (1), International Labour Conference, 61st Session).
5. WHO Technical Report Series, No. 49, 1952 (*Nursing*. Second Report of the Expert Committee), p. 18.
6. De Moerloose, J. Nursing: a survey of recent legislation. *International digest of health legislation*, **4**: 463–485 (1953).
7. WHO Technical Report Series, No. 558, 1974 (*Community health nursing*. Report of a WHO Expert Committee).
8. WHO. *Legislation concerning nursing/midwifery services and education*. Report on a WHO Working Group. Copenhagen, WHO Regional Office for Europe, 1981 (EURO Reports and Studies, No. 45).
9. WHO Technical Report Series, No. 708, 1984 (*Education and training of nurse teachers and managers with special regard to primary health care*. Report of a WHO Expert Committee).
10. Mangay Maglacas, A. et al. *Six country case studies on the utilization of nurse practitioners* (in preparation).
11. Council of Europe. *Further training for nurses in the member states of the Council of Europe and in Finland*. Strasbourg, 1983.
12. Styles, M.M. *Project on the regulation of nursing 1984*. Geneva, International Council of Nurses, 1984.
13. Forgotson, F.H. et al. Legal regulation of health personnel in the USA. In: *Report of the National Advisory Committee on Health Manpower*, vol. II. Washington, DC, US Government Printing Office, 1967, p. 414.
14. Roemer, R. Legal systems regulating health personnel: a comparative analysis, *Milbank Memorial Fund quarterly*, **66**: 43, 455–456 (1968).
15. Spalding, E.K. *Nursing legislation and education: a study of the role of national governments and voluntary associations*. Washington, DC, Catholic University of America Press, 1963.
16. Limprasutr, P. et al. *Evaluation of public health nurse practitioners in Thailand*. Bangkok, Mahidol University Faculty of Public Health, 1982.
17. Paxman, J.M. et al. *The use of paramedicals for primary health care in the Commonwealth: a survey of medical-legal issues and alternatives*. London, Commonwealth Secretariat, 1979.
18. Sigerist, H.E. The history of medical licensure. In: Roemer, M.I., ed. *Henry E. Sigerist on the sociology of medicine*. New York, MD Publications, 1960, p. 308.
19. Shryock, R.H. *Medical licensing in America, 1950–1965*. Baltimore, MD, Johns Hopkins University Press, 1967.
20. Rocereto, L.R. & Maleski, C.M. *The legal dimension of nursing practice*. New York, Springer Publishing Company, 1982.
21. *The study of credentialing in nursing: a new approach*. Kansas City, MO, American Nurses' Association, 1979.
22. Friedman, L.W. Freedom of contract and occupational licensing 1890–1910: a legal and social study. *California law review*, **53**: 487, 495–496 (1965).
23. Roemer, R. Nursing functions in other countries: insights for the United States. In: Bullough, B., ed. *The law and the expanding nursing role*, 2nd ed. New York, Appleton-Century-Crofts, 1980.

24. HINSVARK, I.G. & MACARTHUR, M.L. Toward a definition of nursing. In: *The study of credentialing in nursing: a new approach*. Kansas City, MO, American Nurses' Association, 1979, p. 381.
25. BULLOUGH, B. The third phase in nursing licensure. In: Bullough, B., ed. *The law and the expanding nursing role*, 2nd ed. New York, Appleton-Century-Crofts, 1980.
26. BULLOUGH, B. The first two phases in nursing licensure. In: Bullough, B., ed. *The law and the expanding nursing role*, 2nd ed. New York, Appleton-Century-Crofts, 1980.
27. PAXMAN, J.M. & ZUCKERMAN, R.J. *Laws and policies affecting adolescent health*. Geneva, World Health Organization (in press, 1986).
28. *International digest of health legislation*, **34**: 241–243 (1983).
29. *Putting "health" into health care*. Ottawa, Canadian Nurses Association, 1980 (submission to Health Services Review '79), p. 5.
30. *Canada's National Provincial Health Program for the 1980s: a commitment for survival*. Report of the Special Commissioner, Health Services Review '79. Ottawa, 1980, p. 72.
31. PAXMAN, J. *Law and planned parenthood*. London, International Planned Parenthood Federation, 1980, p. 69.
32. PAXMAN, J. ET AL. *Expanded roles for non-physicians in fertility regulation: legal perspectives*. Boston, MA, Fletcher School of Law and Diplomacy, 1976 (Law and Population Monograph, No. 41).
33. ISAACS, S.L. *Population law and policy*. New York, Human Sciences Press, 1981, p. 252.
34. ROSENFIELD, A. Family planning: an expanded role for paramedical personnel. *American journal of obstetrics and gynecology*, **110**: 1030 (1971).
35. OSTERGARD, D. ET AL. The family planning specialist as a provider of health care services. *Fertility and sterility*, **23**: 505 (1972).
36. OWEN, M. Laws and policies affecting the training and practice of traditional birth attendants. *International digest of health legislation*, **34**: 456–457 (1983).
37. ROEMER, R. The nurse practitioner in family planning services: law and practice. *Family planning/Population reporter*, **6**: 28–34 (1977).
38. GREENFIELD, S. Protocols as analogs to standing orders. In: Bullough, B., ed. *The law and the expanding nursing role*, 2nd ed. New York, Appleton-Century-Crofts, 1980.
39. SIEGEL, M.A. & BULLOUGH, B. Constructing and adapting protocols. In: Bullough, B., ed. *The law and the expanding nursing role*, 2nd ed. New York, Appleton-Century-Crofts, 1980.
40. *Human resource development for primary health care*. New York, United Nations Development Programme, 1983 (Evaluation Study No. 9), p. 9.
41. CAYLA, J.-S. The nursing profession. *International digest of health legislation*, **33**: 366–377 (1982).
42. WOLFF, M.A. Court upholds expanded practice roles for nurse. *Law, medicine and health care*, **12**: 26–29 (1984).
43. GREENLAW, J. Sermchief v. Gonzales and the debate over advanced practice. *Law, medicine and health care*, **12**: 30–31 (1984).
44. *International digest of health legislation*, **28**: 130 (1977).
45. MAHLER, H. Nurses lead the way. *WHO features*, No. 97, June 1985.

Annex 1

EXPLANATION OF TERMS USED IN THIS REPORT

1. Regulation

The process whereby order, consistency, and control are brought to an occupation and its practice, through the establishment of guidelines, rules, and procedures for the implementation of a statute, for the monitoring of practice, and for the initiation of appropriate corrective action.

2. Regulatory mechanisms

The means by which regulation is carried out, including legal or official action and action taken by voluntary or professional bodies. Examples of regulatory mechanisms are licensure, registration, certification, accreditation or approval of educational programmes and facilities, and rules of health authorities, institutions, and agencies.

3. Regulatory body

A governmental statutory body, e.g., a general nursing council or nongovernmental agency charged with implementing measures to control the qualification of personnel, and/or standards of performance, and frequently standards of professional conduct.

4. Licensure

The granting, through statute by a government body, of authority to practise a profession and to use an exclusive title, to persons who meet certain established standards of education and competence. Such a statute may be:

(*a*) *mandatory*—requiring licensure for all who practise the profession; or

(*b*) *voluntary or permissive*—granting permission to persons who have met the required standards to present themselves as members of the profession, but not requiring licensure for all who practise the profession.

5. Accreditation

Recognition, by a nongovernmental agency, of a programme, institution, or service that has met certain established standards beyond those that are minimally acceptable.

6. Scope of practice

Definition of the boundaries within which the individual is authorized to function. This may take the form of:

(*a*) *general authorization of practice*—through a statute defining practice in terms of purposes and overall functions without enumeration of specific authorized procedures (this is an elastic, enabling definition allowing considerable autonomy, independence, and breadth of activity); a flexible statute, allowing the addition of new functions as and when appropriate; or

(*b*) *specific authorization of practice*—through a statute or regulation defining practice in terms of particular procedures authorized; a restrictive definition limiting practice to the functions and procedures authorized.

7. Regulations of a ministry, governmental department or statutory body

Rules issued by a ministry or department or body in conformance with a statute and setting forth procedures for carrying out the statutory requirements. Such regulations (rules) have the force of law.

8. Nurse practitioner

A person who has completed the requirements for practising as a professional or graduate nurse and who has completed a course of study that prepares her/him to undertake an autonomous nursing role, engaging in health education, using her/his assessment skills to identify abnormal physical and/or mental signs and symptoms, and managing certain minor and chronic illnesses. The nurse practitioner may act in a supportive and consultative capacity *vis-à-vis* the members of the nursing team and the medical practitioner.

9. Standing order

Written instructions issued by professional health staff, as authorized by the responsible authority of an institution, describing the action to be followed by a nurse or other personnel in specific types of case.

Annex 2

AUTHORIZATION OF NURSING TASKS RELATING TO PRIMARY HEALTH CARE: RESULTS OF A SURVEY[1]

The following extracts, from an unpublished WHO report, summarize the findings, by WHO Region, of a survey of the frequency with which 15 nursing tasks relating to primary health care are authorized and the mechanisms whereby they are authorized. Tabular summaries are included for the five WHO Regions in which ten or more countries replied, and some general comments emerging from the survey are appended.

African Region

In the African Region of WHO (Table 2), 16 countries took part in the survey. Of the 15 tasks, 11 are authorized in all these countries, and the other four tasks are authorized in all but one of them.

The principal mechanisms for authorizing these nursing tasks are nursing practice acts and ministry of health (or hospital) regulations, with slightly more reliance on the latter. Standing orders by a physician and specific orders by a physician for a particular patient are also used by a substantial proportion of the respondents. Prescribing oral contraceptives and inserting IUDs are the only tasks authorized by nursing practice acts in less than 50% of the respondent countries.

Region of the Americas

In the Region of the Americas too few countries replied to permit any significant generalizations to be made. In the USA, in the last 15 years at least 40 jurisdictions have expanded the scope of nursing practice as authorized by state nursing practice acts. In 1983, the Supreme Court of Missouri issued a landmark decision recognizing the independent role of the nurse in performing diagnostic and treatment functions consistent with her education, judgement, and

[1] Abridged from: MANGAY MAGLACAS, A. & ROEMER, R. Survey of nursing tasks relating to primary health care. Geneva, World Health Organization, 1985 (unpublished document HMD/NUR/SG/2).

Table 2. Nursing tasks relating to primary health care in 16 countries of the African Region of WHO, by number of countries authorizing each task and method of authorization*

Task	Total number of countries authorizing task	Number of countries not authorizing task	Number of countries authorizing task by:				
			nursing practice act	regulation of ministry of health or hospital	physician's standing orders	specific order of a physician for a specific patient	other authority
Taking blood pressure	16	0	11	12	8	7	1
Giving immunizations	16	0	9	15	8	2	1
Diagnosing common diseases	16	0	9	11	9	2	1
Treating common diseases	16	0	10	11	9	7	1
Prescribing drugs for common ailments	16	0	9	11	11	8	1
Performing minor surgery	16	0	9	10	9	11	1
Handling trauma in emergencies	16	0	9	10	11	9	0
Doing simple diagnostic tests	16	0	10	11	11	8	1
Giving injections	16	0	10	11	11	8	1
Giving oral medication	16	0	10	11	11	8	1
Management of chronic diseases	16	0	8	11	13	9	0
Performing physical examinations	15	1	9	9	10	10	1
Referring for X-rays or other diagnostic tests	15	1	8	8	11	11	1
Prescribing oral contraceptives	15	1	7	8	10	8	1
Inserting IUDs	15	1	7	7	6	10	1

*The numbers for the several forms of authorization do not add up to the total number of countries responding, because a task is usually authorized by more than one method.

skill under a modernized nursing practice act. Thus, the court held that appropriately trained nurses are authorized to do breast and pelvic examinations, pregnancy testing, Papanicolaou smears, gonorrhoea cultures, blood serology, administration of all kinds of contraceptive methods, and counselling and education of patients.[1]

The replies from three South American countries indicate that nurses are not allowed to prescribe drugs for common ailments or perform minor surgery. One of these countries also does not allow nurses to diagnose common diseases, to prescribe oral contraceptives, or to insert IUDs. But in a fourth South American country, all the tasks listed are authorized by the nursing practice act, except referral for X-rays or other diagnostic tests, which is authorized by the order of a physician for a specific patient.

South-East Asia Region

In the South-East Asia Region of WHO (Table 3), ten countries replied. Of the 15 nursing tasks relating to primary health care, seven are authorized by one means or another in all ten countries. The other eight nursing tasks are authorized by eight or nine countries each. Authorization is granted mainly through ministry of health (or hospital) regulations, but some reliance is placed on nursing practice acts and, to a lesser extent, on standing medical orders.

The tasks least frequently authorized are referring for X-rays, performing minor surgery, prescribing oral contraceptives, and inserting IUDs. In the eight countries authorizing these tasks for nurses, the principal authorizing mechanisms are ministry of health (or hospital regulations).

European Region

In the European Region of WHO (Table 4), 18 countries replied. The tasks most frequently authorized by all or nearly all countries are taking blood pressure, giving injections, giving oral medication, giving immunizations, handling trauma in emergencies, doing simple diagnostic tests, and managing chronic diseases. For almost every

[1] See COOK, R.J. & DICKENS, B. Nurses in fertility regulation—legal confirmation of an expanding role. *IPPF Medical Bulletin*, **18**: 3–4 (1984).

Table 3. Nursing tasks relating to primary health care in 10 countries of the South-East Asia Region of WHO, by number of countries authorizing each task and method of authorization*

Task	Total number of countries authorizing task	Number of countries not authorizing task	Number of countries authorizing task by:				
			nursing practice act	regulation of ministry of health or hospital	physician's standing orders	specific order of a physician for a specific patient	other authority
Giving injections	10	0	4	6	3	4	
Giving oral medication	10	0	5	7	3	3	
Giving immunizations	10	0	3	5	2	3	1
Handling trauma in emergencies	10	0	3	5	3	6	
Taking blood pressure	10	0	4	6	3	5	
Management of chronic diseases	10	0	5	5	2	3	
Performing physical examinations	10	0	2	5	2	4	
Doing simple diagnostic tests	9	1	2	6	3	4	
Treating common diseases	9	1	1	3	3	4	
Prescribing drugs for common ailments	9	1	0	4	2	3	
Diagnosing common diseases	9	1	1	4	3	3	
Referring for X-rays or other diagnostic tests	8	2	1	3	2	4	
Performing minor surgery	8	2	1	2	0	0	
Prescribing oral contraceptives	8	2	1	6	2	3	
Inserting IUDs	8	2	1	6	3	3	

*The numbers for the several forms of authorization do not add up to the total number of countries responding, because a task is usually authorized by more than one method.

Table 4. Nursing tasks relating to primary health care in 18 countries of the European Region of WHO, by number of countries authorizing each task and method of authorization*

Task	Total number of countries authorizing task	Number of countries not authorizing task	Number of countries authorizing task by:				
			nursing practice act	regulation of ministry of health or hospital	physician's standing orders	specific order of a physician for a specific patient	other authority
Taking blood pressure	18	0	15	2	5	4	2
Giving injections	18	0	13	5	4	7	2
Giving oral medication	18	0	13	4	4	7	2
Giving immunizations	17	1	5	6	6	9	2
Handling trauma in emergencies	17	1	10	3	4	7	3
Doing simple diagnostic tests	17	1	11	4	4	5	2
Management of chronic diseases	17	1	7	2	3	9	2
Referring for X-rays or other diagnostic tests	14	4	0	3	4	8	1
Performing physical examinations	13	5	6	3		2	1
Treating common diseases	11	7	2	1	4	5	2
Diagnosing common diseases	9	9	3	1	1	2	1
Prescribing drugs for common ailments	8	10	1	0	1	3	
Inserting IUDs	8	10	1	3	2	3	1
Performing minor surgery	7	11	3	1		3	
Prescribing oral contraceptives	6	12	0	2	1	2	

*The numbers for the several forms of authorization do not add up to the total number of countries responding, because a task is usually authorized by more than one method.

task the principal source of authorization is a nursing practice act, although other forms of authorization are used as well.

The nursing procedures least frequently authorized are: prescribing oral contraceptives, performing minor surgery, inserting IUDs, and prescribing drugs for common ailments. Half or fewer than half of the countries authorized nurses to perform these procedures. Where they are authorized, various mechanisms are used, including those listed in the survey, and also others, such as a civil law authorizing nurses to handle trauma in emergencies, approval of the nursing curriculum which teaches nurses to perform many of these functions, and authorization by a health centre. But nursing practice acts constitute the source of authority more frequently in the European Region than in any of the other WHO Regions.

Eastern Mediterranean Region

In the Eastern Mediterranean Region of WHO (Table 5), 20 countries replied. Of the 15 tasks, seven are authorized by at least 18 of the respondent countries. The predominant mechanisms for authorizing these tasks are nursing practice acts and ministry of health (or hospital regulations), but some reliance is also placed on standing or specific medical orders.

The other eight tasks are authorized by at least 12 of the 20 countries. The least frequently authorized tasks are prescribing contraceptives and inserting IUDs, but even these are authorized in 13 and 12 countries, respectively, most frequently by regulation or on medical orders, rather than by nursing practice acts. For all the procedures authorized, nursing practice acts are the sources of authorization in less than 50% of the countries, except for the performance of simple diagnostic tests.

Western Pacific Region

In the Western Pacific Region of WHO (Table 6), 12 countries replied. Of the 15 nursing tasks relating to primary health care, seven are authorized by one means or another in all 12 countries. At least 10 of the 12 countries authorize six additional tasks. The principal mechanism for authorization is the nursing practice act, but heavy reliance is also placed on all the other mechanisms. The tasks least frequently authorized are inserting IUDs (eight countries) and prescribing oral contraceptives (nine countries). Where these

Table 5. Nursing tasks relating to primary health care in 20 countries of the Eastern Mediterranean Region of WHO, by number of countries authorizing each task and method of authorization[a]

Task	Total number of countries authorizing task	Number of countries not authorizing task	Number of countries authorizing task by:				
			nursing practice act	regulation of ministry of health or hospital	physician's standing orders	specific order of a physician for a specific patient	other authority
Giving injections	20	0	9	8	2	3	
Giving oral medication	20	0	9	8	2	4	
Giving immunizations	20	0	8	10	2	2	2
Handling trauma in emergencies	20	0	7	5	3	7	
Doing simple diagnostic tests	20	0	10	7	3	2	1
Management of chronic diseases	19	1	6	7	4	5	2
Taking blood pressure	18	2	7	4	6	2	
Performing physical examinations	17	3	4	4	4	1	3
Treating common diseases	17	3	3	5	4	2	3
Referring for X-rays or other diagnostic tests	16	4	1	1	1	5	2
Performing minor surgery	15	5	1	1	1	4	2
Prescribing drugs for common ailments	14	6	2	2	4	2	3
Diagnosing common diseases	14	6	1	4	3	2	3
Prescribing oral contraceptives	13	7	1	3	3	6	5
Inserting IUDs	12	8	1	1	3	5	5

[a] The numbers for the several forms of authorization do not add up to the total number of countries responding, because a task is usually authorized by more than one method.

Table 6. Nursing tasks relating to primary health care in 12 countries of the Western Pacific Region of WHO, by number of countries authorizing each task and method of authorization[a]

Task	Total number of countries authorizing task	Number of countries not authorizing task	Number of countries authorizing task by:				
			nursing practice act	regulation of ministry of health or hospital	physician's standing orders	specific order of a physician for a specific patient	other authority
Taking blood pressure	12	0	8	4	6	5	1
Giving injections	12	0	7	4	6	5	1
Giving oral medication	12	0	7	7	5	5	1
Giving immunizations	12	0	7	5	2	3	
Handling trauma in emergencies	12	0	6	5	5	6	2
Doing simple diagnostic tests	12	0	5	4	5	5	1
Performing minor surgery	12	0	4	3	4	4	1
Management of chronic diseases	11	1	6	5	6	6	1
Referring for X-rays or other diagnostic tests	11	1	2	4	3	2	1
Performing physical examinations	10	2	2	4	3	3	2
Treating common diseases	10	2	5	4	3	4	2
Diagnosing common diseases	10	2	4	3	1	2	1
Prescribing drugs for common ailments	10	2	4	3	4	4	1
Prescribing oral contraceptives	9	3	3	5	3	4	
Inserting IUDs	8	4	1	4	3	5	

[a] The numbers for the several forms of authorization do not add up to the total number of countries responding, because a task is usually authorized by more than one method.

functions are authorized, it is usually by means other than the nursing practice act.

Comments

1. The principal conclusion to be drawn from this survey is that there is a worldwide tendency to extend the scope of nursing practice. As the education of nurses becomes more comprehensive (and as new technology in health becomes available), nursing functions in primary health care and in clinical settings are being expanded. This is true in both developing and developed countries.

2. A variety of mechanisms are used to authorize new and expanded tasks for nurses. In fact, more than one mechanism may authorize a particular task. Sometimes a task is authorized at first by standing orders and later governed by statute or by a regulation of the ministry of health. As regards regional differences, nursing practice acts are the source of authority in the European Region more frequently than in any other.

3. There are several reasons why it is important for extensions in the scope of nursing practice to be authorized: to provide the population with broader access to health care; to use the potentialities of nurses to the full; and to protect nurses against any liability associated with their work. Several countries expressed concern in this survey about the legal liability involved in performing certain functions in the absence of clear authorization.

4. In general, nurses are authorized to carry out a wider range of functions in remote areas where there are no physicians than in areas where physicians are available. Nevertheless, even in countries where the supply of physicians is adequate, an extension of nursing functions may represent the most cost-effective use of health personnel.

5. The replies to the questionnaire indicate that nurses are authorized to perform more tasks in public services provided by government and in organized frameworks, such as health centres, than in private offices and facilities.

6. While the survey has examined experience with 15 nursing tasks relating to primary care services in 81 countries, it should not be assumed that these include all the potential tasks. The reply from one country (USSR) pointed out that, in addition to the tasks listed in the survey, nurses there perform two other important tasks in primary health care: (*a*) ascertaining risk factors, and (*b*) providing

health education to groups and individuals. Moreover, in the future the performance of still other tasks may be deemed appropriate for the nurse. In view of the dynamic character of nursing education and practice, the question arises whether authorization for additional nursing tasks should be specific to each task or whether it should be open-ended to accommodate new needs and practices.

7. The necessity for new or revised mechanisms for the authorization of nursing functions relating to primary health care should be evaluated in each country. In some countries, the existing regulatory mechanisms may be appropriate and adequate. In others, new or revised legislation, regulations, or other authorization may be required to ensure the best use of nursing personnel, to protect the nurse, and to ensure greater coverage of the population by primary health care. A periodic review of nursing practice and of authorization for needed nursing functions is advisable in order to keep regulatory mechanisms abreast of progress in health care.

Countries participating in the survey, by WHO Region

African Region (16 out of 45 countries)	— Botswana, Cameroon, Congo, Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Lesotho, Liberia, Nigeria, Sierra Leone, Swaziland, Uganda, United Republic of Tanzania, Zaire;
Region of the Americas (5 out of 34 countries)	— Bolivia, Colombia, Ecuador, Peru, United States of America (California);
South-East Asia Region (10 out of 11 countries)	— Bangladesh, Bhutan, Burma, India, Indonesia, Republic of Korea, Mongolia, Nepal, Sri Lanka, Thailand;
European Region (18 out of 35 countries)	— Austria, Belgium, Czechoslovakia, Finland, France, Federal Republic of Germany, Greece, Hungary, Ireland, Israel, Italy, Poland, Spain, Sweden, Turkey, United Kingdom, Union of Soviet Socialist Republics, Yugoslavia;

Eastern Mediterranean Region (20 out of 22 countries)	— Afghanistan, Bahrain, Cyprus, Democratic Yemen, Djibouti, Egypt, Iraq, Kuwait, Libyan Arab Jamahiria, Jordan, Lebanon, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Somalia, Tunisia, Yemen;
Western Pacific Region (12 out of 20 countries)	— Australia (Victoria), Cook Islands, Fiji, Lao People's Democratic Republic, Malaysia, New Zealand, Papua New Guinea, Philippines, Samoa, Solomon Islands, Tonga, Vanuatu.

WORLD HEALTH ORGANIZATION TECHNICAL REPORT SERIES

Recent reports:

No.		Sw. fr.
716	(1985) **Epidemiology of leprosy in relation to control** Report of a WHO Study Group (60 pages)	6.—
717	(1985) **Health manpower requirements for the achievement of health for all by the year 2000 through primary health care** Report of a WHO Expert Committee (92 pages)	8.—
718	(1985) **Environmental pollution control in relation to development** Report of a WHO Expert Committee (63 pages)	6.—
719	(1985) **Arthropod-borne and rodent-borne viral diseases** Report of a WHO Scientific Group (116 pages)	10.—
720	(1985) **Safe use of pesticides** Ninth report of the WHO Expert Committee on Vector Biology and Control (60 pages)	6.—
721	(1985) **Viral haemorrhagic fevers** Report of a WHO Expert Committee (126 pages)	10.—
722	(1985) **The use of essential drugs** Second report of the WHO Expert Committee on the Use of Essential Drugs (50 pages)	6.—
723	(1985) **Future use of new imaging technologies in developing countries** Report of a WHO Scientific Group (67 pages)	7.—
724	(1985) **Energy and protein requirements** Report of a Joint FAO/WHO/UNU Expert Consultation (206 pages)	17.—
725	(1985) **WHO Expert Committee on Biological Standardization** (1985) Thirty-fifth report (140 pages)	11.—
726	(1985) **Sudden cardiac death** Report of a WHO Scientific Group (25 pages)	4.—
727	(1985) **Diabetes mellitus** Report of a WHO Study Group (113 pages)	9.—
728	(1985) **The control of schistosomiasis** Report of a WHO Expert Committee (113 pages)	10.—
729	(1985) **WHO Expert Committee on Drug Dependence** Twenty-second report (31 pages)	4.—
730	(1986) **Dementia in later life: research and action** Report of a WHO Scientific Group (74 pages)	10.—
731	(1986) **Young people's health—a challenge for society** Report of a WHO Study Group on Young People's Health and "Health for All by the Year 2000" (117 pages)	16.—
732	(1986) **Community prevention and control of cardiovascular diseases** Report of a WHO Expert Committee (62 pages)	9.—
733	(1986) **Evaluation of certain food additives and contaminants** Twenty-ninth report of the Joint FAO/WHO Expert Committee on Food Additives (59 pages)	9.—
734	(1986) **Recommended health-based limits in occupational exposure to selected mineral dusts (silica, coal)** Report of a WHO Study Group (82 pages)	12.—

WHO publications may be obtained, direct or through booksellers, from:

ALGERIA: Entreprise nationale du Livre (ENAL), 3 bd Zirout Youcef, ALGIERS

ARGENTINA: Carlos Hirsch, SRL, Florida 165, Galerias Güemes, Escritorio 453/465, BUENOS AIRES

AUSTRALIA: Hunter Publications, 58A Gipps Street, COLLINGWOOD, VIC 3066 — Australian Government Publishing Service *(Mail order sales)*, P.O. Box 84, CANBERRA A.C.T. 2601; *or over the counter from*: Australian Government Publishing Service Booshops *at*: 70 Alinga Street, CANBERRA CITY A.C.T. 2600; 294 Adelaide Street, BRISBANE, Queensland 4000; 347 Swanston Street, MELBOURNE, VIC 3000; 309 Pitt Street, SYDNEY, N.S.W. 2000; Mt Newman House, 200 St. George's Terrace, PERTH, WA 6000; Industry House, 12 Pirie Street, ADELAIDE, SA 5000; 156–162 Macquarie Street, HOBART, TAS 7000 — R. Hill & Son Ltd., 608 St. Kilda Road, MELBOURNE, VIC 3004; Lawson House, 10–12 Clark Street, CROW'S NEST, NSW 2065

AUSTRIA: Gerold & Co., Graben 31, 1011 VIENNA I

BANGLADESH: The WHO Programme Coordinator, G.P.O Box 250, DHAKA 5

BELGIUM: *For books*: Office International de Librairie s.a., avenue Marnix 30, 1050 BRUSSELS. *For periodicals and subscriptions*: Office International des Périodiques, avenue Louise 485, 1050 BRUSSELS — *Subscriptions to World Health only*: Jean de Lannoy, 202 avenue du Roi, 1060 BRUSSELS

BHUTAN: *see* India, WHO Regional Office

BOTSWANA: Botsalo Books (Pty) Ltd., P.O. Box 1532, GABORONE

BRAZIL: Biblioteca Regional de Medicina OMS/OPS, Sector de Publicações, Caixa Postal 20.381, Vila Clementino, 04023 SÃO PAULO, S.P.

BURMA: *see* India, WHO Regional Office

CANADA: Canadian Public Health Association, 1335 Carling Avenue, Suite 210, OTTAWA, Ont. K1Z 8N8 (Tel.: (613) 725-3769, Telex: 21-053-3841)

CHINA: China National Publications Import & Export Corporation, P.O. Box 88, BEIJING (PEKING)

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA: *see* India, WHO Regional Office

DENMARK: Munksgaard Export and Subscription Service, Nørre Søgade 35, 1370 COPENHAGEN K (Tel.: + 45 1 12 85 70)

FIJI: The WHO Programme Coordinator, P.O. Box 113, SUVA

FINLAND: Akateeminen Kirjakauppa, Keskuskatu 2, 00101 HELSINKI 10

FRANCE: Librairie Arnette, 2 rue Casimir-Delavigne, 75006 PARIS

GERMAN DEMOCRATIC REPUBLIC: Buchhaus Leipzig, Postfach 140, 701 LEIPZIG

GERMANY FEDERAL REPUBLIC OF: Govi-Verlag GmbH, Ginnheimerstrasse 20, Postfach 5360, 6236 ESCHBORN — Buchhandlung Alexander Horn, Friedrichstrasse 39, Postfach 3340, 6200 WIESBADEN

GHANA: Fides Enterprises, P.O. Box 1628, ACCRA

GREECE: G.C. Eleftheroudakis S.A., Librairie internationale, rue Nikis 4, ATHENS (T. 126)

HONG KONG: Hong Kong Government Information Services, Beaconsfield House, 6th Floor, Queen's Road, Central, VICTORIA

HUNGARY: Kultura, P.O.B. 149, BUDAPEST 62

INDIA: WHO Regional Office for South-East Asia, World Health House, Indraprastha Estate, Mahatma Gandhi Road, NEW DELHI 110002

INDONESIA: P.T. Kalman Media Pusaka, Pusat Perdagangan Senen, Block I, 4th Floor, P.O. Box 3433/Jkt, JAKARTA

IRAN (ISLAMIC REPUBLIC OF): Iran University Press, 85 Park Avenue, P.O. Box 54/551, TEHERAN

IRELAND: TDC Publishers, 12 North Frederick Street, DUBLIN 1 (Tel: 744835–749677)

ISRAEL: Heiliger & Co., 3 Nathan Strauss Street, JERUSALEM 94227

ITALY: Edizioni Minerva Medica, Corso Bramante 83–85, 10126 TURIN; Via Lamarmora 3, 20100 MILAN; Via Spallanzani 9, 00161 ROME

JAPAN: Maruzen Co. Ltd., P.O. Box 5050, TOKYO International, 100–31

JORDAN: Jordan Book Centre Co. Ltd., University Street, P.O. Box 301 (Al-Jubeiha), AMMAN

KUWAIT: The Kuwait Bookshops Co. Ltd., Thunayan Al-Ghanem Bldg, P.O. Box 2942, KUWAIT

LAOS PEOPLE'S DEMOCRATIC REPUBLIC: The WHO Programme Coordinator, P.O. Box 343, VIENTIANE

LUXEMBOURG: Librairie du Centre, 49 bd Royal, LUXEMBOURG

MALAWI: Malawi Book Service, P.O. Box 30044, Chichiri, BLANTYRE 3

A/1/86

BEST COPY AVAILABLE

WHO publications may be obtained, direct or through booksellers, from:

MALAYSIA: The WHO Programme Coordinator, Room 1004, 10th Floor, Wisma Lim Foo Yong (formerly Fitzpatrick's Building), Jalan Raja Chulan, KUALA LUMPUR 05-01; P.O. Box 2550, KUALA LUMPUR 01-02; Parry's Book Center, 124-1 Jalan Tun Sambanthan, P.O. Box 10960, 50730 KUALA LUMPUR

MALDIVES: *See* India, WHO Regional Office

MEXICO: Libreria Internacional, S.A. de C.V., Av. Sonora 206, 06100-MEXICO, D.F.

MONGOLIA: *See* India, WHO Regional Office

MOROCCO: Editions La Porte, 281 avenue Mohammed V, RABAT

NEPAL: *See* India, WHO Regional Office

NETHERLANDS: Medical Books Europe BV, Noorderwal 38, 7241 BL LOCHEM

NEW ZEALAND: New Zealand Government Printing Office, Publishing Administration, Private Bag, WELLINGTON, Walter Street, WELLINGTON, World Trade Building, Cubacade, Cuba Street, WELLINGTON. *Government Bookshops at*: Hannaford Burton Building, Rutland Street, Private Bag, AUCKLAND; 159 Hereford Street, Private Bag, CHRISTCHURCH; Alexandra Street, P.O. Box 857, HAMILTON; T & G Building, Princes Street, P.O. Box 1104, DUNEDIN — R. Hill & Son Ltd, Ideal House, Cnr Gillies Avenue & Eden Street, Newmarket, AUCKLAND 1

NORWAY: Tanum — Karl Johan A.S., P.O. Box 1177, Sentrum, N-0107 OSLO 1

PAKISTAN: Mirza Book Agency, 65 Shahrah-E-Quaid-E-Azam, P.O. Box 729, LAHORE 3

PAPUA NEW GUINEA: The WHO Programme Coordinator, P.O. Box 646, KONEDOBU

PHILIPPINES: World Health Organization, Regional Office for the Western Pacific, P.O. Box 2932, MANILA

PORTUGAL: Livraria Rodrigues, 186 Rua do Ouro, LISBON 2

REPUBLIC OF KOREA: The WHO Programme Coordinator, Central P.O. Box 540, SEOUL

SINGAPORE: The WHO Programme Coordinator, 144 Moulmein Road, SINGAPORE 1130; Newton P.O. Box 31, SINGAPORE 9122

SOUTH AFRICA: *Contact major book stores*

SPAIN: Ministerio de Sanidad y Consumo, Centro de publicaciones, Documentación y Biblioteca, Paseo del Prado 18, 28014 MADRID — Comercial Atheneum S.A., Consejo de Ciento 130-136, 08015 BARCELONA; General Moscardó 29, MADRID 20 — Libreria Diaz de Santos, P.O. Box 6050, 28006 MADRID; Balmes 417 y 419, 08022 BARCELONA

SRI LANKA: *See* India, WHO Regional Office

SWEDEN: *For books*: Aktiebolaget C.E. Fritzes Kungl. Hovbokhandel, Regeringsgatan 12, 103 27 STOCKHOLM. *For periodicals*: Wennergren-Williams AB, Box 30004, 104 25 STOCKHOLM

SWITZERLAND: Medizinischer Verlag Hans Huber, Länggassstrasse 76, 3012 BERN 9

THAILAND: *See* India, WHO Regional Office

UNITED KINGDOM: H.M. Stationery Office: 49 High Holborn, LONDON WC1V 6HB; 13a Castle Street, EDINBURGH EH2 3AR; 80 Chichester Street, BELFAST BT1 4JY; Brazennose Street, MANCHESTER M60 8AS; 258 Broad Street, BIRMINGHAM B1 2HE; Southey House, Wine Street, BRISTOL BS1 2BQ. *All mail orders should be sent to*: HMSO Publications Centre, 51 Nine Elms Lane, LONDON SW8 5DR

UNITED STATES OF AMERICA: *Copies of individual publications (not subscriptions)*: WHO Publications Center USA, 49 Sheridan Avenue, ALBANY, NY 12210. *Subscription orders and correspondence concerning subscriptions should be addressed to the* World Health Organization, Distribution and Sales, 1211 GENEVA 27, Switzerland. *Publications are also available from the* United Nations Bookshop, NEW YORK, NY 10017 *(retail only)*

USSR: *For readers in the USSR requiring Russian editions*: Komsomolskij prospekt 18, Medicinskaja Kniga, MOSCOW — *For readers outside the USSR requiring Russian editions*: Kuzneckij most 18, Meždunarodnaja Kniga, MOSCOW G-200

VENEZUELA: Libreria Medica Paris, Apartado 60.681, CARACAS 106

YUGOSLAVIA: Jugoslovenska Knjiga, Terazije 27/II, 11000 BELGRADE

Special terms for developing countries are obtainable on application to the WHO Programme Coordinators or WHO Regional Offices listed above or to the World Health Organization, Distribution and Sales Service, 1211 Geneva 27, Switzerland. Orders from countries where sales agents have not yet been appointed may also be sent to the Geneva address, but must be paid for in pounds sterling, US dollars, or Swiss francs. Unesco book coupons may also be used.

Price: Sw. fr. 10.–

Prices are subject to change without notice.